Everybody wants to sell everything

(Marketing

BUSINESS

A McGRAW-HILL PUBLICATION

TWENTY-FIVE CENTS

JUNE 1, 1957

Under Glen B. Miller, Allied Chemical is fighting from under a burden of tradition. (Management)

VIIN VEROU WICH

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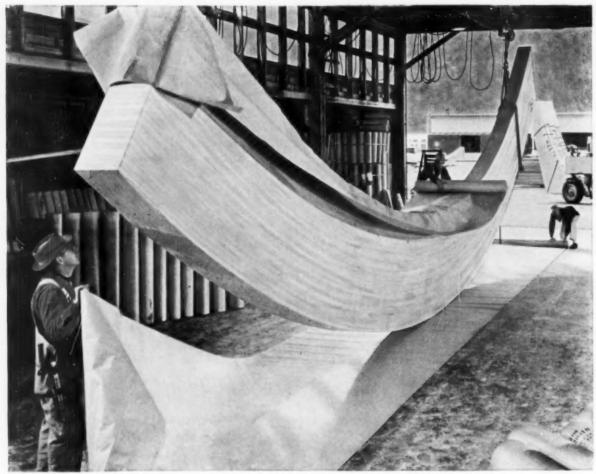


Photo courtesy American Singlerati Corp., Attleboro, Mass., and Timber Structures, Inc., Portland, Ore

"One Giant Beam - and Wrap It, Please"

How would you fill such an order? Even if you had the weighty, wooden structural arch, what would you use to protect its natural beauty against the abrasion, abuse, weather and dirt encountered in shipment?

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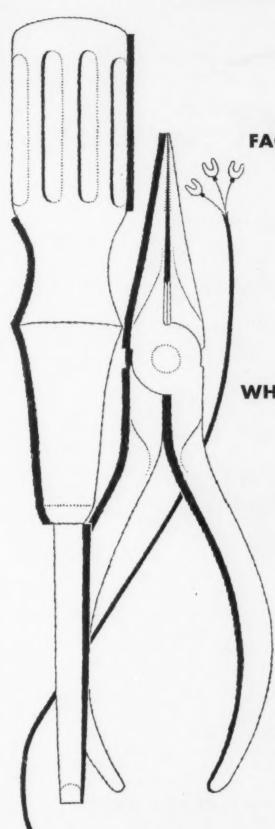
FIGURES OF THE WEEK 1947-49=100 170 1947-49=100 160 160 150 150 140 140 130 130 1957 120 120 110 J F M A M J J A S O N D 1952 1953 1954 1955 1956 Month 1946 Year Week & Lotest Average Ago Ago Ago Wook BUSINESS WEEK INDEX (chart) 91.6 146.9 143.6 †143.5 *144.2 PRODUCTION 1.281 2,370 2,226 †2.212 2.246 Steel Ingot (thous. of tons)..... 138,608 159,992 62,880 1162,538 159,012 Automobiles and trucks..... \$17,083 \$72,115 \$68,944 \$64,909 \$57,529 Engineering const. awards (Eng. News-Rec. 4-wk daily av. in thous.)...... 10,927 11,310 11,519 11,574 Electric power (millions of kilowatt-hours)..... 4,238 4,751 7,071 7.537 7,511 117,456 Crude oil and condensate (daily av., thous. of bbls.)..... 1,745 11,614 Bitumineus coal (daily av., thous. of tons)...... 1,608 1.700 1.607 167,269 285,603 248,935 286,720 282,388 Paperboard (tons) TRADE Carloadings: miscellaneous and Le.L. (daily av., thous. of cars)...... 74 67 68 67 53 56 48 53 53 Carleadings: all others (daily av., thous. of cars)..... 1129 90 122 133 120 Department store sales index (1947-49 = 100, not seasonally adjusted)..... Business failures (Dun & Bradstreet, number)..... 22 273 263 264 300 PRICES 406.2 413.6 Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100)..... 311.9 4145 411.6 Foodstuffs, daily index (BLS, 1947-49 = 100)..... 94.4 93.3 92.5 92.7 1173.2 1175.4 81.9 81.4 81.3 82.2 17.5¢ 17.8¢ 17.9∉ 17.9 € Print cloth (spot and nearby, yd.)..... 19.14 Finished steel, index (BLS, 1947-49 = 100)..... ††76.4 158.1 174.0 174.4 174.4 \$42.83 \$47.17 \$47.50 \$20.27 \$47.50 Scrap steel composite (Iron Age, ton)..... 14.045€ 45.788€ 31.910€ 31,760€ N.A. Copper (electrolytic, delivered price, E & MJ, lb.)..... \$2,30 \$2.25 \$2.24 Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)..... \$1.97 \$2.20 **30.56¢ Cotton, daily price (middling, 1 in., 14 designated markets, lb.)..... 36.39€ 33.86€ 33.90€ 33.93∉ Weel teps (Boston, lb.).... \$1.51 \$1.72 \$2.18 \$2.22 \$2.22 FINANCE 500 stocks composite, price index (S&P's, 1941-43=100). Medium grade corporate bond yield (Baa issues, Moody's). Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate)...... 47.18 46.90 17.08 44.61 45.71 3.73% 4.47% 4.56% 3.05% 4.53% 3 1/2 % 3/4-1% 31/4 % 3 1/4 % 3 % % **BANKING (Millions of Dollars)** N.A. Demand deposits adjusted, reporting member banks..... 1145,820 55,444 56,695 55,057 Total leans and investments, reporting member banks..... ††71,916 85,115 86,716 85,905 N.A. Commercial and agricultural leans, reporting member banks. U. S. gov't guaranteed obligations held, reporting member banks...... N.A. 119.299 28.093 31.349 31.569 1149,879 25.221 26,877 25.972 N.A. Total federal reserve credit outstanding..... 23,888 25,310 25,695 25,031 \$25,070 MONTHLY FIGURES OF THE WEEK 1946 Latest Ago McGraw-Hill Indexes of New Orders (1950 = 100) N.A. 146 142 143 N.A. 1AR 177 156 N.A. 151 132 165 Pumps and compressors......April N.A. 157 200 171 N.A. 207 157 160 Other industrial machinery.......April......April...... NA 131 140 135 Office equipmentApril......April..... N.A. 134 179 171 N.A. 309 144

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Preliminary, week ended May 25, 1957.

^{††} Estimate. • * Ten designated markets, middling }{ in.

⁸ Date for 'Latess Week' on each series on request. N. A. Not available.



FACT: Last year, Western Electric's 20,000*-man force of trained installers worked on 43,500 different jobs in 7,000 cities and towns from coast to coast.

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more telephones and the
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meeting the demand...Our
job is to back up the
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READERS REPORT

All About Brainpower

Dear Sir:

Your article on The General Shortage of Brain Power [BW-Apr.27'57,p176] was, without doubt, the best study of this problem we have ever seen. . . . JOHN A. FRINK

PRESIDENT MECHANEERS, INCORPORATED WESTPORT, CONN.

Dear Sir:

Your article was superb. And the illustrations were intriguing enough to attract many readers who should but who might not otherwise read

WILLIAM PAPIER BUREAU OF UNEMPLOYMENT COMPENSATION COLUMBUS, OHIO

Dear Sir:

. . . You are to be complimented on the depth and scope of this. . . . DONALD E. O'BEIRNE

YOUTH UNLIMITED FOUNDATION EATON RAPIDS, MICH.

Dear Sir:

This is indeed a very excellent review and analysis and we were particularly gratified to note the emphasis on the need for industry to adopt personnel policies for engineers in keeping with their professional status.

MILTON F. LUNCH EXECUTIVE ASSISTANT NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS WASHINGTON, D. C.

Dear Sir:

... The article is excellent but it doesn't refer at all to the continually growing brainpower of the men over 50 who are turned down in almost every case in their search for another 10 to 15 years active participation in the business world.

This writer knows because when he sold his own business two years ago and attempted to sell his 30 valuable years in all branches of the business world, no one would make an offer of any value. It was quite comical to see personnel officers and others shy away from a 50-year-old person as if he had

This writer wasted almost \$1,000 on planned campaigns, many forms of advertising, etc. and all without one bit of success.

I mention the above just to indi-



IN GOOD TIMES OR BAD

Paper is needed whatever the times. In good times the paper industry prospers first. In bad, it suffers least. In fact, through the boom and bust and boom of the last thirty years, paper production has grown at the average annual rate of 720,000 tons. Both growth and stability characterize the industry.

Since 1870, Huyck (pronounced Hike) has kept pace with paper industry expansion. F. C. Huyck & Sons are leaders in the manufacture of papermakers' felts, and papermakers' felts are used on every paper machine in the world.

A Huyck felt is a precision-made fabric which may be woven as wide as 55 feet and as long as 300 feet, and it may carry a price tag close to \$5,000. So vital is the "right" felt that Huyck engineers analyze each machine and process before they design and custom-fabricate this essential machine part—which has an average life of only about three weeks.

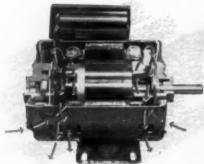
Huyck's highly specialized technical knowledge and manufacturing equipment distinguish the company in its own industry. Huyck's preeminent research work and field experience have established the company's engineers as recognized consultants to papermakers.

Huyck continues to grow as an integral part of the prospering paper industry.

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*DuPont registered trademark

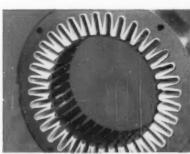
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from 1/200 to 200 horsepower



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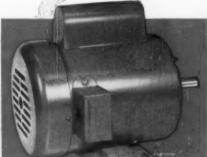
Here's a dynamic new motor-smaller, lighter, more versatile than older frame motors-yet with undiminished performance and reserve power. Completely new R&M "Model R" fractional horsepower motors will perform dependably and enhance the appearance and acceptability of your products. They range from 1 to 1/8 HP in types for all your applications: polyphase, permanent split capacitor, capacitor start single phase and (in the smaller ranges) split phase types. Designed in new NEMA frames 56 and 48, they are lighter due to new applications of aluminum, steel and copper . . . smaller thanks largely to a unique new ventilating system . . . more versatile because of weight, size and many other design features involving frames, mountings, insulation etc. Look over the big advantages these motors offer you! Then write today for R&M Bulletin No. 450-BZ.



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OBBINS & MYERS, INC.

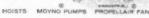
















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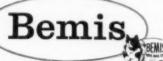


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EXIT THE OLD CREAM CAN... enter Bemis and savings! Farmers now ship in sanitary Polyethylene Cream Bags. No utensils to wash or lose, no return problem. Typical saving with Bemis Flexible Packaging: with cream in bags, trucks double the pay load! We cut costs many ways.

WHERE FLEXIBLE PACKAGING IDEAS ARE BORN . . .



Bemis may already be making the better package you need . . . write to: Trade Extension Dept., Bemis Bro. Bag Co., 408-D Pine Street, St. Louis 2, Missouri cate that sometime, someone has got to readjust this unfair situation. There is a great lot of valuable brainpower going to waste that could be used in this present "shortage" if it is really needed.

C. STOWELL CARROLL

TROY, N. Y.

Dear Sir:

Your reports, Three Solid Years Ahead [BW—Apr.27'57,p41] and General Shortage of Brain Power, are timely and interesting. Although the reports were widely separated . . . they do represent problems which are closely associated. . . . IRWIN P. SHARPE

IRWIN P. SHARPE & ASSOC.
MANAGEMENT CONSULTANTS
WEST ORANGE, N. J.

Dear Sir:

. . . I think that it is a first-rate contribution to the subject. . . .

JOHN W. GARDNER

PRESIDENT
CARNEGIE CORP. OF
NEW YORK
NEW YORK, N. Y.

Dear Sir:

The six word paragraph "But nobody yet has the answers" (to provide the urgently required brainpower) is a good example of how hopeless dogmatism can seize upon and stifle constructive effort when man is faced with a problem that seems to defy rational analysis.

It might have been more correct to say, "None who were approached were able to supply the answers." The word "nobody" covers a lot of territory. . . .

G. R. HARRINGTON

LACY, ATHERTON & DAVIS WILKES-BARRE, PA.

Fade Away

Dear Sir:

So the unions are worried [BW—Mar.23'57,p82]! John Q. Public is getting tired of paying, via higher and higher costs, for the increasing benefits demanded by union members. He will do without, or obtain substitute goods and services elsewhere, and let the welfare state, the unions cherish, fade away.

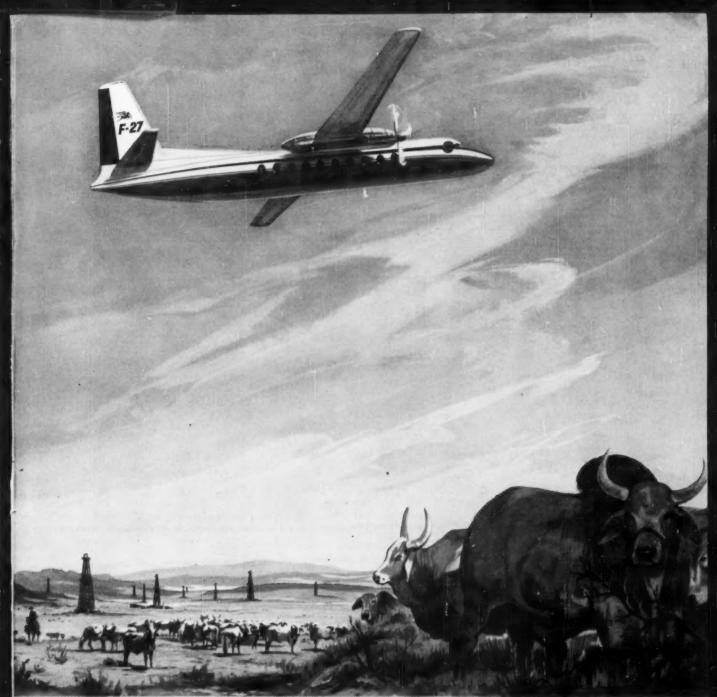
J. F. BURNS

BOSTON, MASS.

Needless Extravagance

Dear Sir:

In your issue [BW—Apr.20'57, p58] you refer to this federal [Frying Pan-Arkansas dam] project, and state: "It is threatened by



TEXAS

Lone Star



From the Rio Grande to the hills of New England, the Fairchild F-27 outshines anything in its class. This exciting new propjetliner gives today's airlines equipment modern as tomorrow.

Seating up to 40 passengers in its pressurized cabin, it flies smoothly and quietly on the propjet power of its airline-proven Rolls-Royce Dart engines—gets in and out of short fields with ease. Airfields at altitude rarely impose a payload penalty on the F-27—and single-propjet performance is superb.

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THEY'RE AN UNBEATABLE TEAM to speed the cleaning of oily, greasy floors. Here's wby: A Scrubber-Vac completely mechanizes scrubbing. It applies the cleanser, scrubs, flushes if required, and picks up (damp-dries the floor)—all in one operation! Job-fitted to specific needs, a Scrubber-Vac provides the maximum brush coverage consistent with the area and arrangement of the floors. Its teammate, Setol Cleanser, is specially designed for the greater speed of combination-machine-scrubbing... emulsifies grimy oil and grease instantaneously for fast, thorough removal by the machine's powerful vac. Moreover, Setol retains its strength longer than average alkaline cleansers. This, too, speeds the cleaning process... saves on materials... and cuts operating time of the machine, which in turn reduces labor costs.

The Scrubber-Vac shown above is Finnell's 213P, for heavy duty scrubbing of large-area floors. It's self-propelled, and has a 26-inch brush spread. Cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon condition of the floors, congestion, et cetera. (The machine can be leased or purchased.) Finnell makes a full range of sizes, and self-powered as well as electric models . . . also a full line of fast-acting cleansers. In fact, Finnell makes everything for floor care!

Find out what you would save with combination-machine-scrubbing. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 3806A East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of FINNELL PRINCIPAL

Power Scrubbing and Polishing Machines

BRANCHES
IN ALL

FINNELL PRINCIPAL

CITIES

the economy drive, although the greater part of the cost of this big reclamation project would eventually be recovered." We cannot agree with what you write....

... It involves putting into circulation now vast sums of money to be repaid, if ever, far into the future. If the interest is compounded, the project cost is over \$500-million, and the revenue can never repay the interest on this amount; in fact, the indebtedness would continue to increase indefinitely.

The project is to irrigate 921 farms at a cost of \$65,000 per farm and \$500 per acre. Half the area to be irrigated is Class 2 land which should not be under cultivation but in pasture. . . . To move water through the Continental Divide at such a fantastic figure, to raise more farm commodities, when the government already has \$8-billion of surpluses on hand, does not appear reasonable

There are some good reclamation projects but this is one of the worst....

CLINTON B. STEWART

PRESIDENT

PITKIN COUNTY WATER

PROTECTION ASSN.

ASPEN, COL.

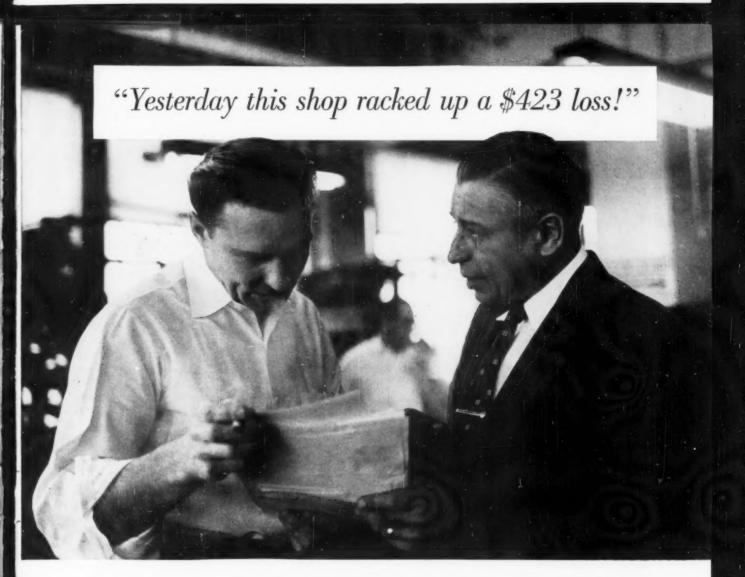
Melting Point

Dear Sir:

Certainly, widespread interest must have been created by your Science Outdoes the Diamond [BW—Mar.2'57,p78] in the potentialities of "tailoring" the physical properties of high strength, high temperature, highly abrasion resistant materials....

However, it appears misleading to evaluate "Borazon" by referring to industrial diamonds as having a melting point of 1,200F . . . [scientific authorities indicate | the melting point of the diamond as being very much higher than 1,200F even under pressures which would exist at pressures existing at the surface of a diamond wheel during a grinding operation. Undoubtedly, the diamond chips in a grinding wheel will disintegrate by evaporation due to heat and pressure. And this would also be associated with chemical effects tending to oxidize carbon, both solid and vapor on exposure to oxygen in the air at temperatures created by grinding operations. But there does not appear to be any melting of diamonds involved.

RALPH C. HOSTERMAN CARBIDE & CARBON CHEMICALS CO. CHARLESTON, W. VA.



The foreman's bewildered. How can the plant manager be so sure? Even in a small shop like this one, you don't get *that* kind of information in 24 hours!

The plant manager never thought so, either. Today he knows different. He's got yesterday's down-time figures right in front of him. There's a loss all right. But he knows where — and why. And most important, he knows now that he's equipped to prevent its happening again.

How did the plant manager get such fast, reliable information? With the Keysort Plant Control Plan. Instead of the late or inadequate reports he *used* to get, PCP

now gives him an accurate breakdown of each day's labor costs by the following afternoon. Keeping abreast of things almost as they happen, he can correct moneylosing situations in time... can keep production flowing on a profitable level.

With just five fast, accurate Keysort PCP reports—1 daily, 2 weekly, 2 monthly—you can obtain complete modern management control of your business and your profits. At remarkably low cost.

The nearby McBee man has a presentation which will show you how it's done. Phone him, or write us for illustrated folder containing an example of each report.

McBEE





Punched-card accounting for any business

Manufactured exclusively by The McBee Company, Athens, Ohio • Division of Royal McBee Corporation
Offices in principal cities • In Canada: The McBee Company, Ltd., 179 Bartley Drive, Toronto 16, Ontario



A Boeing B-47 Stratojet medium bomber gets a take-off assist from 30 Phillips Petroleum Company M15 JATOs.



N-A-X HIGH-TENSILE is readily formed and welded. Here, before welding, a worker sizes the container's aft head, drawn by a 250-ton press. Bottom forging is locked in.

N-A-X HIGH-TENSILE STEEL FORMS AND WELDS READILY

Formability: Even at the higher strength levels (50% greater than mild carbon steel) this material can be cold formed and drawn into very difficult stampings and cold formed shapes.

Weldability: Its weldability by any process is excellent, maintaining toughness through a wide range of temperatures. Under-bead cracking tests are excellent. Using American Welding Society standard bead-weld testing, shows under-bead hardness rises only to 95 Rockwell from 80-85 Rockwell prior to welding.

Make *your* product better, too—with this high-strength steel

HOW N-A-X HIGH-TENSILE STEEL

supplied the money-saving answer to a critical take-off problem

JATO rockets boost heavily laden planes into the air faster, let them operate from shorter runways. A new JATO developed by Phillips Petroleum Company required a case that would endure a pressure of 1,000 pounds per square inch at the high blast temperatures. Yet it must be lightweight, easily fabricated, economical.

In 1954, 100 JATO cases of N-A-X HIGH-TENSILE steel were tested at Air Force Plant 66 near McGregor, Texas, where Phillips Petroleum is contractor-operator.

Result: The N-A-X HIGH-TENSILE case passed every test with flying colors. It *surpassed* the required standards for strength by as much as 20 percent.

The high-strength characteristics that make N-A-X HIGH-TENSILE a better steel for JATO fuel containers also make it better for many other types of pressure containers, where high strength

and lighter weight are equally important. It is particularly suitable for Propane cylinders and pressure vessels for the chemical, automotive and oil industries, that must withstand severe interior pressures and handling abuses . . . and for such products as truck and trailer frames, wheels and bumpers, railroad and earth-moving equipment, shipping containers, pipe, and many others.

Other Important Advantages: N-A-X HIGH-TEN-SILE STEEL, compared with carbon steel, is 50% stronger ● has high fatigue life with great toughness ● is more stable against aging ● is more resistant to atmospheric corrosion. It polishes to a high luster at minimum cost ● has greater resistance to abrasion or wear ● offers greater paint adhesion.

With N-A-X HIGH-TENSILE you can design longer life, strength with lightness, and economy into your products. Let us show you how.

COMPANION HIGH-STRENGTH STEEL IN THE N-A-X FAMILY

N-A-X FINEGRAIN. A low-alloy high-strength steel ideally suited for applications where the enhanced resistance to atmospheric corrosion of N-A-X HIGH-TENSILE is not required.

N-A-X Alloy Division

GREAT LAKES STEEL CORPORATION

Detroit 29, Michigan

Division of

NATIONAL STEEL CORPORATION



N-A-X Alloy Div Great Lakes Stee	v., Dept. BW, of Corp., Detroit 2	19, Mich.		
Please send	me 8-page illustr ENSILE Steel.	ated technical	catalog of	
Please have y	our representative	contact me.		
Name		Title		
Company		_		



For working and living the U.S. has no finer climate than we have here in MOA – never too hot or too cold. Our plant has no heating or air conditioning system and needs none. That's an important saving. We have no weather-induced shutdowns. High morale of local labor – always a factor in productivity – is, I believe, largely due to opportunities for outdoor living the year around – made possible by our climate.

ARTHUR D. ANGELL • Vice President in charge of the Western Division, Dewey & Almy Chemical Co. Division, W. R. Grace & Co.



Because climate is one of its great natural resources...

INDUSTRIES "GROW PLACES" IN MOA

(Metropolitan Oakland Area)

MOA's bland, steady weather is a money-maker, a moneysaver. Plants expanding Westward to MOA find heating costs minimal, air conditioning almost a curiosity. Here, weather makes a major contribution to growth.

PROOF: Among 28 national firms with branches in the Metropolitan Oakland Area, there have been 97 expansions since 1945. One firm made 8 major expansions. One which put \$½ million into expansion in 1945 now has more than \$10 million invested in new facilities here. A firm which moved into MOA in 1952, investing \$½ million, now has almost \$5 million "planted" here. The experience of these 28 firms, spending almost \$59 million in ten years or less to keep up with their increased business, is typical.

Quick snapshot of MOA's climate: Mean maximum temperature for January, 56°, September, 74°. Mean minimums: January, 38.4°; September, 52.6°. No hard frosts, messy thaws, lasting snows, floods, or sweltering days. No shutdowns or absenteeism due to weather, no summer-heat slumps. Weather allows flat-roof construction, one-floor plant layout. minimum insulation, sweeping banks of windows

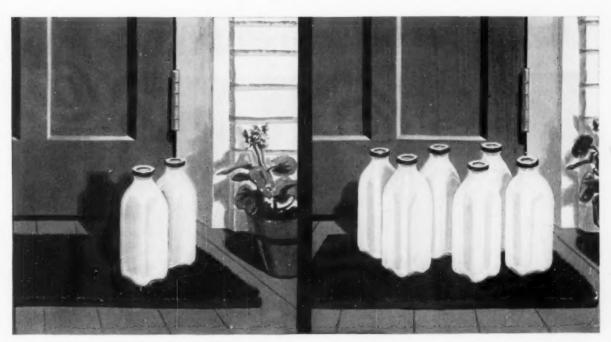
without undue heat loss, year-round outdoor operation, open storage, cheaper packing and shipping.

When it's time to branch out, move to MOA. Here, you can serve 11 Western states and overseas ports, with a market of almost 4 million at your elbow...economical rail, truck, ship and plane transport at your door. Where the weather's on your side, let MOA's friendly climate help you "grow places," too!

WRITE FOR FREE FACTFILE

Your inquiry will be held confidential, and you will receive complete, concise Data Sheets providing a complete "preplant" survey of climate, markets, living conditions, transportation networks, sources of supply and available plants and plant sites.

Metropolitan Oakland Area Suite 201 • 1320 Webster St., Oakland 12, California



In 1940, when the "baby boom" began, the population of the United States totaled 132 million.

Today, America has 170 million people. At current growth rate, population will reach 221 million by 1975.

Will special tooling be the bottleneck in your production plans?

In less than 15 years the nation's population is expected to pass the 200-million mark. On the horizon are tremendous market potentials, and to compete your company must be in a position to develop more and better products.

A serious bottleneck can be your special tooling—the dies, jigs, fixtures, molds, gages, and other special tools and machinery you need for low-cost, precision mass-production. If you depend solely on your own tooling facilities, you might be left at the starting gate.

Manufacturers who take advantage of contract tooling facilities get fast delivery of the most complex special tools...at a fair price. They benefit from the contract plant's industry-wide experience, its excellent equipment and its many creative skills.

Manufacturers who go outside for special tooling divert more of their skilled manpower to production work, more of their capital investments to production equipment, more of their plant space to production operations, and more of their planning to production problems.

Let capable NTDMA plants handle your special tooling work...and remove a major bottleneck on your road to new profits. For a complete list, write for the NTDMA Directory of Member Plants and Services.

National Tool & Die Manufacturers Association

907 Public Square Building, Cleveland 13, Ohio



IT PAYS TO GO OUTSIDE FOR SPECIAL TOOLING

The beauty of fine woods

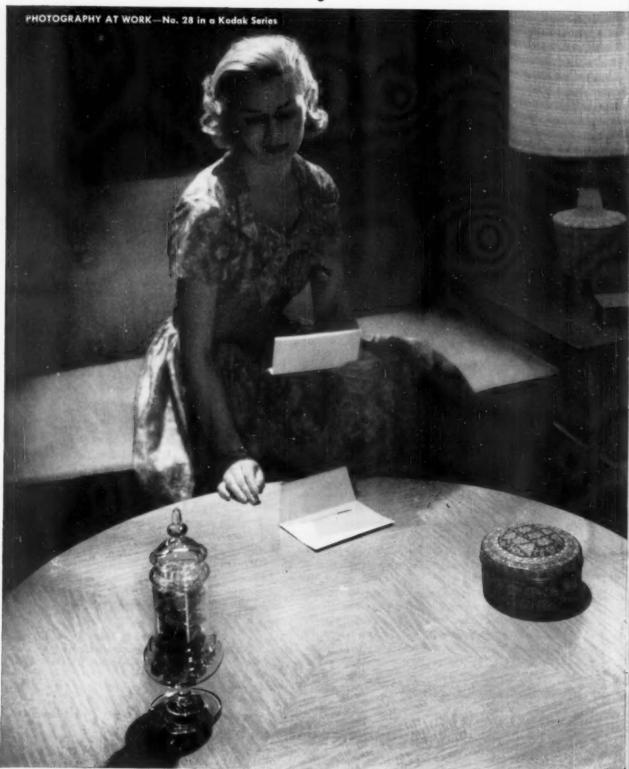


Table top with beautiful natural prima vera color and grain reproduced by Interchemical's Polyfax process.

can now grace everyone's castle

Photography reproduces exactly the finest grain patterns of rare and costly woods for Interchemical Corporation's Polyfax process

THE CHOICE grain of costly woods, once a feature restricted to collectors' items, can now enrich everyone's television set, furniture, kitchen cabinets, or almost anything. Even though mass produced of modern low-cost materials, they can seem to be made of beautiful wood. Or of marble, cloth or tile for that matter.

For the Polyfax process which applies these perfectly simulated finishes starts with a full-size photograph of the actual material, carefully selected for especially fine appearance. With the pattern photographically accurate, it takes close scrutiny to discover that it is not the costly original.

Being a vital part of such a new process, playing an important role in developing a product, are examples of ways photography works for industry today. In large businesses and small, it delves into problems of research and design. It watches quality in the production department. It trains. It sells. It cuts office routine. More of the jobs it does are shown in the list below. Check them over. You'll see that it can save time and reduce costs for you too.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

... and here are 16 basic places where Photography can work for you

-5 minutes with this check list can be the soundest business move you've made this year

- Management—Progress photos, Stockholder reports, Record preservation, Information distribution, Control and Organization charts
- Administration—File debulking, Purchase schedule, Office layout, Interior decoration, Form printing
- Public Relations—News releases, Institutional, Community relations, Public service
- Personnel—Identification photos, Job description, Orientation, Payroll records, Employee personnel records, House organs, Health records, Bulletins
- ☐ Training and Safety—Safety campaigns, Teaching, Reports, Fire prevention
- Engineering Drawings, Specification sheets,
 Drawing protection, Pilot radiography
- Production—Time study, Work methods, Legible drawings, Schedules, Process records
- Advertising—Advertisements, Booklets, Displays, Dealer promotion, Television
- Service-Manuals, Parts lists, Installation photos,

Training helps, Records

- ☐ Product Design & Development—Styling, Consumer testing, Motion studies, Stress analysis, Performance studies
- Research—Reports, Flow studies, Process charts, Library, Photomicrography, Electron-micrography, x-ray diffraction, High-speed motion pictures, etc.
- Testing & Quality Control—Test setups, Reports, Standards library, Radiography, Instrument recording
- Warehousing & Distribution—Inventory control, Damage records, Waybill duplicates, Flow layouts, Packing & Loading records
- Purchasing—Schedules, Duplicate engineering prints, Specifications, Component selection, Source information
- ☐ Sales—Portfolios, Dealer helps, Sales talks, Price & Delivery information
 - Plant Engineering & Maintenance—Plant layout, Repair proposals, Piping & Wiring installations, Progressive maintenance, Record debulking



Send for free booklet "Photography U.S.A." This book shows many of the ways industry is profitably using photography today. It is free. Write for your copy today.

Kodak



THE NAME THAT MEANS EVERYTHING IN BULK MATERIALS HANDLING SYSTEMS, DESIGN, MANUFACTURE, INSTALLATION, AND SERVICE OF ALL COMPONENTS

VERTOL tests world's first Tilt-Wing VTOL Research Aircraft

The new Vertol 76 is a true Vertical Take-Off and Landing (VTOL) aircraft, an experimental vehicle that casts a large shadow into the future.

With its ability to take off, hover and land like a helicopter it is independent of all but the most rudimentary landing area. Yet it flies from point to point with the dispatch of a turbo-prop passenger plane.

In this pioneer air vehicle the wing and roto-propellers tilt as a unit through a 90° are at the will of the pilot. For vertical flight he rotates the wing upward. To fly level he tilts the wing forward. Given a small runway, he can set the wing at the most effective angle to operate Model 76 as a Short Take-Off and Landing (STOL) aircraft and thus increase payload potential.



Engineers, if you are not already working for the government or defense industry, investigate job opportunities with Vertol.

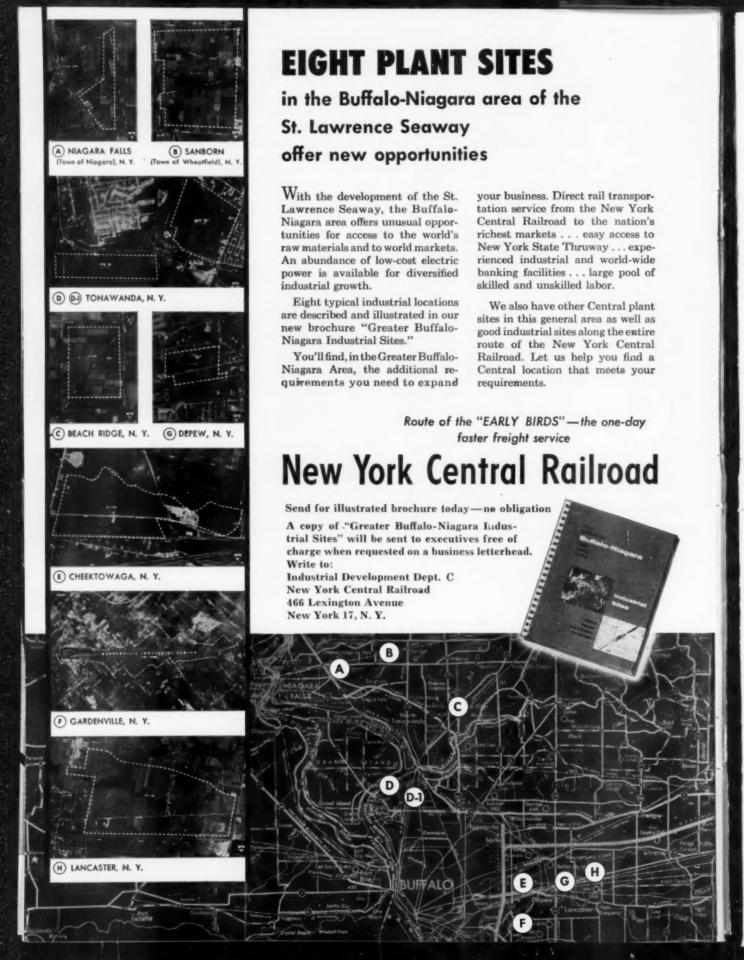
greater mobility and efficiency. From flight tests will come experience and knowledge applicable to the bright future of VTOL in military and commercial aviation.

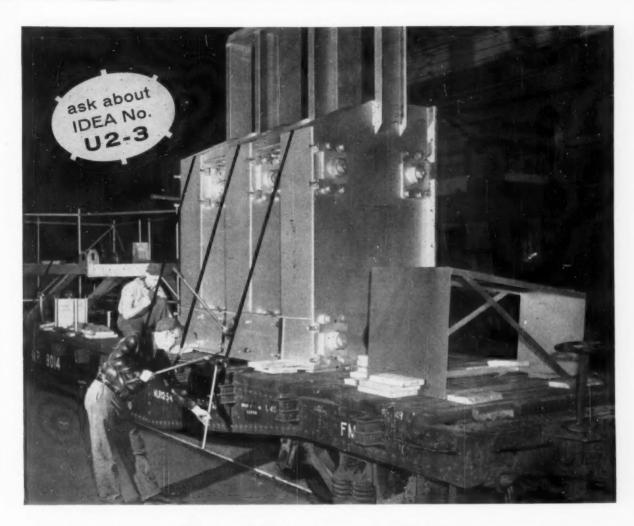
Since 1943 Vertol has been a pioneer in research and development of vertical lift aircraft. It is now the largest independent manufacturer of helicopters. You may find that our know-how, our experienced personnel, our test facilities and our productive capacity can help you solve a problem.



Aircraft Corporation

MORTON, PENNSYLVANIA





Consult your AIM*...Whiting Corporation does... Acme Steel Strapping protects electric furnace shipment

Acme Idea Man Andy Bassi helps Whiting Corporation solve its carloading problems.



When the world's largest electric copper melting furnace left the shops of its manufacturer, Whiting Corporation, Harvey, Illinois, it was securely braced and protected for flatcar shipment with heavy-duty Acme Steel Strapping. It arrived without damage, shifting, or delays en route for securement adjusting. (Idea No. U2-3)

Whiting Corporation relies on heavy-duty Acme Steel Strapping to tie-down and protect rail shipments of all heavy industrial machinery and equipment it manufactures. Shipments are loaded and secured with steel strapping in less than half the time required by the former method of using threaded steel rods that had to be shaped to fit the loads. And a crew of only two men, instead of three, can do the job, releasing a man for other plant duties.

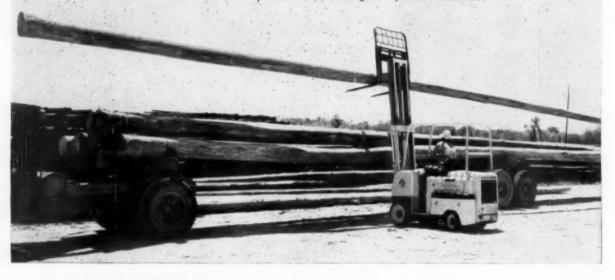
*Consult your Acme Idea Man for advice on ways to better protect your products for handling, shipping, storage. His Ideas-in-Action files contain scores of performance-proved Ideas that can be adapted to meet your needs. Write Dept. BGU-67, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois. In Canada, Acme Steel Company of Canada, Ltd., 743 Warden Ave., Toronto 13, Ontario.



STEEL STRAPPING

This load is TOUGH on masts

The slightest tilt of this type of load on uneven ground places unusual side strain on the mast assembly. But this Allis-Chalmers mast takes it in stride. Its rigid, all-welded channel is designed to resist deflection. The entire mast assembly is precision-built, bearings are pressure-lubricated.



WIDE RANGE OF JOBS OFFER TOUGH TESTS FOR ALLIS-CHALMERS FORK TRUCK

Handles Everything from Pallet Loads to Piling for Freeport Sulphur Co.

Material for five Freeport Sulphur plants is stored at Harvey, La., and shipped out as needed by barge and LCT. An Allis-Chalmers 6,000-lb fork lift truck handles this material into and out of storage as well as on the dock.

The demand on this truck is constant and the types of loads almost limitless, yet every day it passes many severe tests of durability and versatility.

章 章 章

Write for free catalog on the complete Allis-Chalmers fork truck line or see your nearby dealer.

ALLIS-CHALMERS, MATERIAL HANDLING DEFT., BUDA DIVISION MILWAUKEE 1, WISCONSIN

ALLIS-CHALMERS



This ramp is TOUGH on a clutch

Repeated trips up and down the ramp could wreck ordinary clutches. But the torque converter drive on this Allis-Chalmers fork truck eliminates clutch trouble, saves excessive engine wear and holds down fuel consumption.



This job is Tough on nerves

Handling awkward loads in cramped quarters flanked by sheer drops calls for a skillful operator and a safe, responsive truck. Maneuvering an Allis-Chalmers is almost second nature to the operator right from the beginning. It starts, steers, shifts and drives like an automobile.





Her world's on a string when a Clary's on her desk!

A new Clary Adding Machine sends a girl's morale and enthusiasm soaring. The upsurge in her work output tells you she appreciates your giving her the best.

Clarys have everything...will do everything. They have all the features of other machines, plus many exclusives of their own. Their smooth operation and Power Controls are wonderful to work with.

People in 160,000 offices will vouch for every word we say. So call your Clary dealer or Factory Branch Office for a demonstration. Choose 10-key or full key, in 5 Clary colors. Look in your yellow pages today!



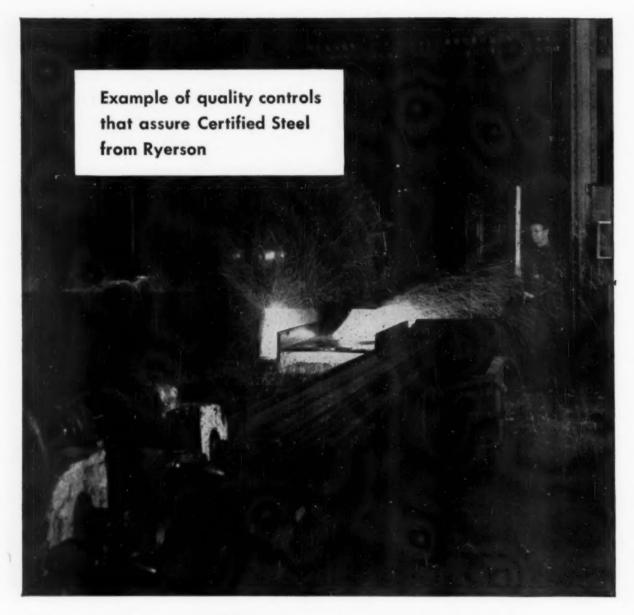


BUSINESS

MACHINES

DIVISION

Clary Corporation,
San Gabriel, California
In Canada: Clary Multiplier
of Canada, Ltd.,
Toronto



Cuts 24" beams in 12 seconds!

When this big friction saw cuts cold steel like hot butter it also completes one more step in the quality control of Ryerson steel.

A new method of blade alignment and an automatic gauge of our own design assure a remarkably straight, true cut—and frequent blade changes result in minimum burr!

This kind of control is typical of the exacting attention we give to every operation. As a result, we achieve far greater accuracy than called for in standard tolerance tables—almost without exception.

Certified cutting of Ryerson steel is an important point to remember when you are discussing purchasing policies with the man who places your steel orders.



JOSEPH T. RYERSON & SON, INC. PLANTS AT: NEW YORK . BOSTON . WALLINGFORD, CONN. . PHILADELPHIA . CHARLOTTE . CINCINNATI CLEVELAND . DETROIT . PITTSBURGH . BUFFALO . CHICAGO . MILWAUKEE . ST. LOUIS . LOS ANGELES . SAN FRANCISCO . SPOKANE . SEATTLE

BUSINESS OUTLOOK

BUSINESS WEEK
JUNE 1, 1957

Set your mind at ease about America's metalworking economy.

It's going strong. Metal users are optimistic about their prospects, not only for this year but into 1958. Real disarmament could dim these prospects, to be sure, but that still seems pretty remote (page 33).



Surface indications of a relapse in metal needs are misleading.

Users are buying less, both ferrous and non-ferrous, of course. But production indexes indicate that they actually are using as much or more than they were a year ago.

The difference comes out of inventory. That's been the story in copper for a year; steel has been taking its turn since January.

Even so, the comedown isn't what the stock market might make it appear. It's just that Wall Street over-bulled the metals last year.

Metals are easy to get this year because autos, the biggest single user, aren't taking so much as everyone had expected.

But this doesn't mean that autos are using less than in 1956.

Actually, auto output for the first half of 1957 seems likely to total about 3.4 million. That would be 200,000 more cars than a year ago—and they are bigger, heavier cars (particularly the "low-priced" ones).

Machinery manufacturers will be needing more metals than ever before if their expectations pan out.

Makers of nonelectrical machinery estimate that their **new orders will run** 5% **larger** in the final nine months of 1957 than the same period a year ago. Moreover, they look for no worse than a 1% decline in incoming business in next year's first quarter compared to this year.

This information on the outlook for nonelectrical machinery is provided in a set of forecasts now made available for the first time by McGraw-Hill Publishing Co.'s Department of Economics.

These forecasts by cooperating manufacturers have been tested for accuracy over a period of more than a year.

The data expand the service previously provided in the same field, heretofore covering only orders actually booked quarter by quarter.

Makers of office machinery expect their orders for the final three quarters of 1957 to outrun the comparable 1956 period by 21%.

' Pump and compressor manufacturers alone foresee a decline in bookings, and they expect the dip to be only about 2%.

The other groups all expect gains: metalworking machinery up 8%, construction and mining machinery 5%, engines and turbines 5%, and other machinery 3%.

One of the relative newcomers in aluminum acknowledged the industry's inventory squeeze this week.

Anaconda Aluminum Co., which now has a monthly capacity of about

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK JUNE 1, 1957 5,000 tons, announced it would cut output about 12½% in June and about that much again in July to work off accumulated inventory.

Two lead-zinc operators in the tri-state area of Missouri, Kansas, and Oklahoma are moving in exactly opposite directions on production.

American Zinc, Lead & Smelting announced "indefinite" closing of its mine at Picher, Okla., declaring present prices are unprofitable. The mine had been on a curtailed basis since January.

Eagle-Picher, however, will resume mining and smelting next week after a shutdown that has lasted for nearly a month.

Food probably will cease to be a price-raiser in the cost-of-living index once the June 15 figure is published.

True, meat prices probably will rise a little between then and early autumn. But this will be at least partially offset by seasonally, lower quotations on fresh fruits and vegetables.

And, by autumn, meats should become a little less costly.

Those who like their meats red and prime will be pleased to hear that the number of cattle being corn-finished is 4% higher than last year.

But the total supply of beef will be lower because there are considerably fewer cattle on grass this year. This will sustain prices, even when slaughter rises seasonally.

Hog prices will go down when the main run to market starts in September. But the drop probably won't be so deep as last year.

The outlook for next year is favorable from the consumer's standpoint: Relatively high hog prices and cheap corn, as always, will encourage farmers to turn out more pork for 1958.

Poultry raised for market will exceed last year's supplies substantially (though shorter supplies of most meats have helped to sustain prices). Broiler output continues to run ahead of a year ago, and turkey supplies are pointing for another new record.

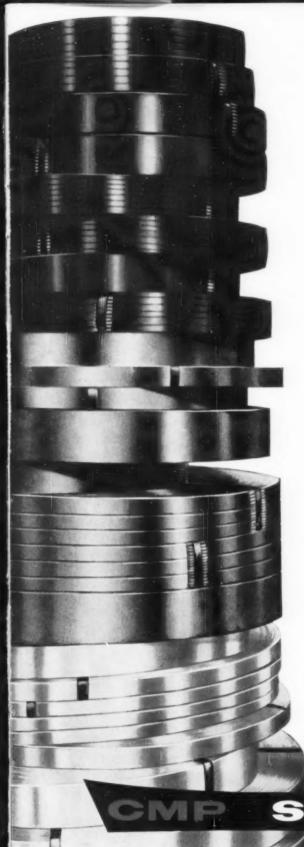
Corporations going to the bond market for new money know interest rates will be stiff. But they may have to offer "sweeteners" as well.

To make issues more popular with investors, underwriters now are likely to insist that the bonds be noncallable for, say, five years. They may make an exception: You will be able to redeem specified amounts via the sinking fund—at a fairly substantial premium above par.

Noncallability protects the investor against early refunding at a lower coupon (or else the sinking fund operation pays him a bonus).

Record demand for money lets the investor write his own ticket.

Corporate securities valued at \$3.6-billion were offered in the first quarter (60% over last year), says the Securities & Exchange Commission. Bonds and notes made up \$2.8-billion of the total.



CMP'S

"RESTRICTED SPECIFICATION" COLD ROLLED STRIP STEEL

Metal fabricators who rely on CMP for cold rolled strip steel enjoy the comfortable feeling of knowing that no better source exists for specialty strip products.

That's CMP strength—the ability to supply both standard and restricted specifications in a wide range of cold rolled strip steel grades and qualities from any one of three plants similarly equipped.

CMP does exactly that. Customers' orders involving restricted specifications can be processed at any one of three CMP plants with assurance of duplication of quality and processing and uniformity of result.

Your inquiries will be welcome, too.



THE COLD METAL PRODUCTS CO.
GENERAL OFFICES: YOUNGSTOWN 1, OHIO

PLANTS: YOUNGSTOWN, INDIANAPOLIS AND LOS ANGELES SALES OFFICES: NEW YORK - CLEVELAND - DETROIT - INDIANAPOLIS CHICAGO - LOS ANGELES - SAN FRANCISCO

Try CMP for 3 in 1 Service

Low Carbon, High Carbon-Annealed or Tempered, Stainless, Alloy, Electro Zinc Coated

STRIP STEEL

There's always with Trane



room at the top air conditioning

One more example of how Trane flexibility saves remodeling headaches... and dollars, too!

Wondering where to put air conditioning refrigeration equipment in a building that wasn't designed for it? You may find, as others have, that "there's always room at the top"—when you use Trane equipment. It's adaptable!

Take refrigeration compressors such as the Trane CenTraVac, left. You can generally fit these anywhere from basement to rooftop with little or no costly building alterations, because they're so simple and compact.

Quiet, vibration free CenTraVacs have been installed next to offices, hotel guest rooms, even libraries. And they're automatic, need no fulltime attendant. Flexible, too, are UniTrane air conditioners. You can install these individually-controlled room units in big-building systems with minimum disturbance to occupants . . . at minimum cost. In year-round air conditioning, they cool or heat, ventilate, filter, dehumidify. As part of the industry's most complete line, they come in varied models to meet varied requirements in any system, any building.

So when you are planning air conditioning discuss Trane with your architect or engineer. Refer them to your nearby Trane Sales Office or write Trane, La Crosse, Wis. You may save headaches—and money, too.

40 stories high, a Trane CenTraVac settles to roof of New York's Barbizon Plaza Hotel. Two such machines will provide cooling equal to the melting of 1,200,000 pounds of ice in 24 hours. Thrifty CenTraVacs automatically supply only the cooling that changing conditions require.

UniTrane air conditioners give each occupant the climate he wants. Individual units can be shut off when cooling isn't needed. No wasted air conditioning.

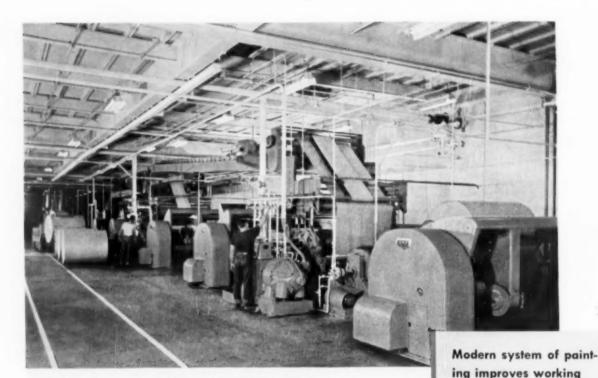


For any air condition . . . turn to

TRANE

MANUFACTURING ENGINEERS OF HEATING, COOLING, VENTILATING AND HEAT TRANSFER EQUIPMENT

The Trane Company, La Crosse, Wis. • Eastern Mfg. Div., Scranton, Pa. • Trane Co. of Canada, Ltd., Toronto 90 U.S. and 19 Canadian Offices



Pittsburgh COLOR DYNAMICS® increases efficiency in making shipping containers

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plant of Hankins

ducing eye fatigue we have increased their efficiency. This system of painting has also contributed to improved morale. Our people take pride in their surroundings and help to keep work areas clean and orderly. From every standpoint, COLOR DYNAMICS has been helpful in bettering our operation."

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RADFORD: "We can't trust the Russians on a disarmament agreement or anything. The Communists have broken their word with every country."



STASSEN: "The U.S. plan could change the trend from a competitive big arms buildup to small arms cuts."

EISENHOWER: "I think our first concern should be making certain we are not ourselves recalcitrant. . . . We ought to have an open mind and make it possible for others, if they are reasonable, logical men to meet us halfway so we can make these agreements."

Why U.S. Hopes for Arms Break

THE QUOTATIONS above—with new hopes carrying the day over old fears—tell a dramatic story. They point up both the changed atmosphere of the U.N. disarmament talks in London and the real, if still cautious, hope this has created in the Administration that some progress toward arms reduction may at last be made.

For 11 long and futile years the major world powers have negotiated endlessly in an effort to vanish the terror of nuclear destruction. But in the new round of five-power arms control talks that began this week in London—to which Harold Stassen, the President's disarmament adviser, carried fresh U.S. terms—there's a new expectancy.

 New Approach—The difference arises out of what happened in talks earlier this year.

For the first time, both the Western atomic powers and the Soviet Union have agreed explicitly to shelve the hopeless search for an across-the-board disarmament agreement, and to try instead for a limited first-step deal on arms control.

This would not affect significantly the existing striking power of the two camps nor the present relative balance of armed strength. But it would slow down the nuclear arms race, which in itself adds to the danger of war, and probably would discourage new nations from entering the race.

What's in Store—After so many years
of frustration, it's hard to think of
"disarmament" except in terms of diplomatic and propaganda sparring between
the West and the East.

And some, like Adm. Arthur W. Radford, chairman of the Joint Chiefs of Staff, still doubt Russian intentions.

But if Washington's cautious hopes, endorsed by Pres. Eisenhower, are realized even partially, by next year a startled world will see such things as:

 Russian aerial inspection planes hovering over U.S. bases in Greenland and Alaska, U.S.-Canadian bases in northern Canada, and over some NATO bases in Europe—and, balancing the picture, U.S. and Allied planes cruising over the vast cold reaches of the Soviet Union north of the Arctic Circle, and parts of Eastern Europe.

• Soviet, Eastern European, and Allied officers delivering small first quantities of armaments—although not nuclear weapons—to depots run by international inspectors.

 Defense budgets on both sides of the Iron Curtain pared by small agreed amounts.

I. "Constructively Realistic"

These and other possibilities of concrete action are implicit in the policy drama played out in Washington during the last 10 days.

In his briefcase on his return flight to London last Sunday, Stassen carried the final minimum U.S. terms for a limited "We must . . . keep exploring . . . every facet of this whole great field [of disarmament] to see if something can't be done. It just has to be done in the interest of the U.S."—Eisenhower.

first-step agreement on arms control. These include a number of significant new concesions designed to bridge the gap between the Russians and the West.

This policy was hammered out in a week of almost round-the-clock consultations among top Administration officials and Congressional leaders of both parties.

 High Level—The pace, urgency, and high level of these conferences were most convincing evidence of the Administration's belief that a limited arms agreement may be possible now.

Participants in the discussions in addition to the President, Secy. of State Dulles, and Stassen, included V.-P. Nixon, Defense Secy. Wilson, his deputy Donald Quarles, Atomic Energy Commission Chmn. Lewis L. Strauss, Admiral Radford, Intelligence Chief Allen Dulles, and leading members of both parties on the Scnate Foreign Relations Committee.

 Not to Miss the Boat—All this doesn't mean that the Administration thinks an agreement is in the bag. There still are a lot of bridges to be built between the opposing positions. And if real progress does prove to be possible at London, it will take months more of patient negotiation to draft a treaty.

One high official who has been close to the London talks puts the Administration's attitude this way: "We are neither optimistic nor pessimistic. We are trying to be constructively rerbistic. There are indications that the Russians may be ready for a first-step deal now, and we don't want to miss the boat if they are. We're keeping an open mind, but one thing we refuse to admit is that the outlook for progress is hopeless."

II. Soviet Concessions

The new spirit of cautious optimism in Washington had been simmering ever since the London Conference began last March, and Russian delegate Valerian Zorin took what U.S. officials regard as a businesslike rather than a propaganda approach. The mood became even more apparent after a dramatic secret session of the conference on Apr. 26, during which Zorin made a number of significant new concessions.

At that time, Zorin:

 Agreed explicitly for the first time to work for partial, limited measures of arms control instead of continuing to try for an across-the-board settlement. The U.S. has insisted for two years that a comprehensive disarmament agreement was impossible without solving political conflicts first. Dropped Russian insistence on the essentiality of climinating nuclear weapons. The U.S. has contended that this no longer is a practical goal, because there is no way technically of detecting stockpiles of nuclear weapons, and no agreement to abolish them would be enforceable.

Dropped former Russian demands for scrapping military bases on

foreign territory.

 Agreed in principle to mutual aerial inspection—which Soviet leaders had denounced as an intelligence trick ever since Eisenhower first proposed it at the "summit" conference in Geneva in 1955.

III. Where Both Sides Stand

These concessions, although they still left wide East-West differences on details, were important enough to send Stassen flying back to Washington to get new negotiating instructions.

Most of the details of the Administration's new proposals are top secret. But enough is known to give a fair general picture of the positions of the two sides as they enter the critical phase of the talks.

Here is the status of the main items en the agenda:

Manpower cuts. The two sides are agreed on cutting back the armed forces to 2.5-million men for the U.S. and the U.S.S.R. and 750,000 each for Britain and France. That would mean demobilizing about 300,000 men for the U.S., maybe 500,000 for the Soviet Union.

The Russians want prior agreement on a second-stage slash to 1.5-million each for the two big powers and 650, 000 for Britain and France. The U.S. so far is opposed, because such a cutback would mean scaling down our worldwide mutual security commitments and a basic strategy revision.

The means of ensuring compliance with the agreed cutback are also still

up in the air.

Armaments reduction. The U.S. has proposed that roughly 10% of the weapons of the countries involved be turned over to international inspectors—the Russians about 15%. This difference appears negotiable, but there is no detailed agreement on what types of weapons would be included in what amounts. The U.S. wants to include all classes of weapons except actual nuclear devices. We specifically include planes, ships, artillery, and missiles capable of delivering atomic warheads.

How the actual weapons turned over could be verified as representing the specified percentage is also not clear. One way to solve the question would be to agree on specific amounts and kinds of weapons which each side would consider fair on the basis of its intelligence estimates of the other's armaments.

Military expenditures. Both the Russians and the West agree in principle to modest cuts in defense budgets. The West proposes 10%, the Soviets 15%. Again the problem of verification is tougher to solve than the difference in

the size of proposed cuts.

Limitation of nuclear weapons to the Big Three. The U.S. would like to see as many nations as possible renounce by treaty the production of nuclear weapons. Inspectors of the proposed International Atomic Energy Agency might check on compliance. Some limitations might be imposed on transfer of nuclear weapons to other countries in peacetime.

Moscow has not taken a position on this. U.S. officials believe the Russians are particularly concerned about the dangers of adding more and more nations to the list of atomic powers, and think they may go along. Washington also thinks the non-atomic powers would agree in order to avert the expense and dangers of getting involved in an expanding nuclear arms race.

Curbs on H-bomb tests. The two sides are moving closer. The Russians have dropped their insistence on a flat verbal ban on tests. The U.S. may agree to postponement of further tests of big H-bombs—which create the most fallout—pending creation of an inspection system, if there is agreement on

setting one up.

Demilitarization of specified pilot areas in Europe. There is little chance of agreement on this. The Russians propose cutting forces of the Big Four in Germany by one-third. The U.S. won't go along with any demilitarization or neutralization in Europe without prior agreement on German unification. We might, however, agree to token troop reductions.

Aerial and ground inspection. Both sides have accepted aerial inspection in principle, but are far apart on areas to be inspected. The Russians propose inspection of Eastern Siberia, the European satellites, and a strip of Western Russia, in exchange for most of Western Europe and the Western half of the U.S. This is unacceptable to Washington.

Stassen apparently now has a green light to propose inspection within the Arctic Circle. Washington is interested in this since a surprise attack on the U.S. would be most likely to come from the North. But the Russians al-

most certainly will want something in return in Western Europe—their most vulnerable flank.

Stassen probably has some leeway to strike a bargain on inspection in Western Europe, but the details are secret. Dulles has been leery of this, for fear of hurting Chancellor Adenauer's chances in the coming German election. But Eisenhower is believed to have overridden these objections, at least partially.

Both sides agree in principle on ground inspection at ports and other

key centers

 Other Proposals—Moscow so far has not reacted to the U.S. offer for halting future production of nuclear weapons as of April next year. The feeling in Washington is that the Russians won't go for this one at this stage—first, because they still are lagging in the nuclear arms race and want to catch up, and second, because it would involve very elaborate inspection and control machinery.

IV. The Home Front

In working out the final U.S. terms, the Administration has kept a wary eye on Congress. Criticism on Capitol Hill of the proposed International Atomic Energy Agency has alerted U.S. officials to the danger of a Congress turndown of any arms control plan not bristling with iron-clad safeguards. A two-thirds Senate majority would be needed to ratify an arms control treaty.

This is just one phase of the larger problem of preparing public opinion in the West for possible cooperation with the Russians to end the arms race. After a decade of cold war, most people are intensely suspicious of any dealings with the Soviets. The feeling in Washington is that only a vigorous educational campaign by Eisenhower can win public acceptance for even the limited arms agreement now sought.

 Divergent Views—You can see the same problem within the Administration itself. There still is deep and dogged resistance within the Pentagon and the "intelligence community" to experimentation with arms control. Adm. Radford's public expressions of skepticism are the most striking example. The skeptics argue that an agreement with the Russians would endanger Western security.

Dulles is in the middle. He is less concerned with the military risks than with the political risks in Europe—and at home—involved in getting too far out on the disarmament limb.

• Eisenhower's Hopes—But the President so far has leaned against his more conservative advisers, and has met Stassen's ideas more than halfway. His intimates report that his fondest dream for his second term is to move toward

substitution of a peace of mutual confidence for one of mutual and ever mounting terror.

• Russian Moves—There are all sorts of theories as to why the Russians have changed. Diplomatically, it would help them to reestablish their respectability so badly damaged in Budapest last fall. Many observers think they are shooting for another summit meeting, or at least a foreign ministers meeting, and see concessions as a way of getting one.

Then the cost of the arms race may really be starting to pinch the hard-pressed Soviet economy. And they may well be genuinely scared by pending moves to arm Europe and Formosa with guided missiles.

Unscary Peace Scare

Stock prices gave some ground as chances picked up for some limited disarmament. But the Street mostly found technical explanations, and no jitters.

This week, the stock market accepted possible disarmament as another of its problems. But last week you had to hunt hard to find anyone in Wall Street who gave even a second thought to a "peace scare."

To be sure, General Dynamics was sagging. But wasn't the stock entitled to a sell-off after its recent rise? And the aircrafts were friendless. But hadn't they been the laggards in the rally that got under way back last February?

 Trend of Talk—In fact, if you wanted to talk stock market, the tone around brokers' offices went more like this:

• The tircless bulls pointed out pet "special situations"—dizzy gyrations in a handful of western oils on merger rumors, Corning Glass' \$20-a-share rumup on its new heat-resistant material, Amerada's return to favor with investors who would rather have oil in the ground than a fat dividend, or Safeway's new popularity in recognition of improved earnings prospects.

 Technicians, poring over charts, noted the truth of anyone's observation that prices obviously had been drifting down all week, but had an answer at hand. Nothing could be more likely or logical than an "adjustment" after the last three months' climb in the price

• Students of another sort pointed out that yields available on listed bonds once again were almost as high as those on stocks. For investors interested in safety and income, rather than price appreciation, some shifting might be in the cards. Besides, still higher yields were to be had in new bond issues making their appearance on the market.

This week, however, you found the general recognition that at least something in the way of limited disarmament had to be weighed in figuring the stock market's future. And, though most analysts weren't looking for the Russians to yield much on which we could count, they expected the first reaction of investors to be anywhere from cautious to skittish.

· Giving Ground-That's the way it

turned out. Prices gave ground more readily on Monday than anytime in the last three months. The widely scrutinized Dow-Jones averages wound up the day with a loss of nearly 5 points; many individual issues were off \$1 to \$3 for the day.

However, even on Monday, it would have been difficult to say that there really was a peace scare. There was, in fact, very little scare at all. Most brokers attributed the drop in prices more to buyers' caution than to sellers' anxiety. In Street jargon, the market was just thin on the buying side.

Many brokers, in fact, felt the market's action was fairly favorable. As one said, "Why should people sell now? In the first place, nobody is silly enough to think peace is bad. Besides, we had real cutbacks in 1945 and 1953, not just the token stuff that we may get now."

Those who took the line that the market was more interested in other things than disarmament could derive support from some of this week's manifestations, too. For example, shares of nonferrous metals producers were weaker than "war babies" in Monday's tumble. And several recently strong chemicals, yielding to profit taking, gave about as much ground as the shares of big aircraft producers.

• Short Week—At the same time, there weren't many brokers bullish enough to insist that the market would turn right around and start marching up again. They felt, if nothing else, that the short week was against it. For the investment fraternity was not just counting on Thursday's holiday, but on rolling up a real weekend that would reduce Friday's trading volume to a trickle.

Few observers are changing their forecasts on the way this year's business will shape up to take into account any results of the London disarmament negotiations. The consensus still calls for an upturn in activity in the autumn. "And," says one broker hopefully, "we doubtless will get easier money if there is any suspicion of a cutback in arms."

Monsanto Yields Consumer Field

A major postwar experiment has come to a close; Monsanto Chemical is withdrawing from the mass markets.

Some of its consumer products—especially the low-suds detergent "all"—were extremely successful.

But merchandising problems proved too great for a company with a basically industrial complexion.

Monsanto Chemical Co., reversing a major postwar policy of getting closer to the consumer, has decided to drop out of direct consumer product competition.

That's the real meaning behind last week's announcement by the \$546-million company that it was turning over its low-suds detergent "all" to Lever Bros. In effect, Monsanto was admitting that the razzle-dazzle and steep promotional budgets of a consumer field such as soaps and detergents just didn't fit into the long-range plans of a

basically industrial producer.

With the sale of "all"—No. 1 product in its field—Monsanto also disbanded its Consumer Products Div. Last week Lever Bros. executives were in St. Louis interviewing Monsanto's consumer personnel who may want to shift to the Lever operation. Only Vice-Pres. Roy L. Brandenburger, who headed the consumer division, and a few others will be absorbed into Monsanto's other operations. Others—in sales, marketing research, and promotion—will either go to Lever Bros., be reassigned at Monsanto, or offered severance pay.

 Close of an Era—Thus ends the big chemical company's coordinated attempt to sell some of its products to the mass consumer market.

At one time, Monsanto had as many as nine products in consumer package sizes. They included Krilium (soil conditioner), Folium (water softener), additional versions of "all," Bogey (pestacide-fungicide), and D-Leet (a selective herbicide). By now most of them have been quietly dropped. This was because Monsanto either had to broaden its line in these fields to make the promotional expense worthwhile, or get out. It chose the latter.

Krilium is still available, but is being sold in bulk lots through the Plastics Div. to ball parks and golf courses. Monsanto's Rez, a wood finishing product, is being handled through the Organic Chemical Div. for sale to hardware, paint, and lumber dealers. A line of farm chemicals with their own trade names, announced last year, will also be sold by that division.

• Big Decision-The decision to get out of consumer merchandising ends at

least six months of corporate soul-searching. The tipoff that something was brewing came in the company's annual report earlier this year. Stockholders were informed by Chmn. Edgar M. Queeny: "... we face the reality that our consumer products line is not now broad enough to support a completely competitive merchandising organization."

Here was clear evidence that the highly diversified industrial chemical producer considered the merchandising costs in the red-hot over-the-counter retailing field out of proportion to the company's other activities.

Monsanto will still manufacture "all" products under an undisclosed "working agreement" with Lever, but the promotional problem will be thrown into the lap of Lever, a company long accustomed to peddling soap.

Consumer Taste—Monsanto got its first taste of consumer merchandising in 1952 when it started packaging Krilium for retail sale. That product was an overnight sensation. Its initial success laid the foundation for the company's consumer stint, with Roy Brandenburger hired from Ralston Purina Co. as the first "Mr. Retail Monsanto" (BW-Jun.7'52,p38). Eventually, though, Krilium petered out, largely because of a price that was too high for the consumer market.

"All," too, was a big selling product right from the beginning. Unlike Krilium, it maintained its original pace almost up to the end. Annual sales were running between \$30-million and \$40million, and it was unquestionably a profitable item.

 Origins—It was developed when Westinghouse Electric Corp., in 1947, went to Monsanto for a controlled-suds detergent for the new automatic washer it planned to make. At first, distribution was handled through Detergents, Inc., but as "all" sales climbed Monsanto acquired that company and took over distribution. Ever since, "all" has been the mainstay of Monsanto's consumer business.

It was a good arrangement for Monsanto, since its Consumer Products Div. bought the raw material from the Inorganic Chemicals Div., and thus the company enjoyed profits at both ends.

Up until last year, "all" sales climbed steadily. But in the annual report, Monsanto noted that consumer sales (almost entirely from "all") dropped some 9% "in a highly competitive market," although latest reports for 1957 show sales again turning upward.

What happened was that other soap manufacturers—Procter & Gamble, Colgate, Lever Bros.—had watched "all" take off, then came out with their own versions, including Dash and Ad. Lever tried to market Vim, but that never went over. By getting "all," Lever now is in a position to compete with P&G and Colgate. Lever's \$60-million promotional budget—against no more than \$3-million to \$4.5-million for Monsanto—will allow it to pit "all" against the inroads of its competitors' Dash and Ad.

 Success Story—Actually, Monsanto had done a spectacular job in merchandising the product. It won acclaim from the consumer industry, especially for its newspaper advertising campaign, which tied in heavy promotion with manufacturers. Washing machine producers would include a box of "all" in their machines when customers bought them. Other soap companies have followed with similar campaigns.

In fact, "all" may have been a little too successful. In the soap business, the sudsy powders still rank this way: P&G's Tide and Cheer in the No. 1 and No. 2 spots and Colgate's Fab in No. 3. When "all" moved into fourth position, it virtually forced the others into a low-suds product. Both Dash and Ad are now being heavily promoted, and it became clear that "all" would continue to require substantial promotional expense.

• Supplier, Too—Monsanto apparently decided it wasn't worth battling the giants. They were already unhappy about Monsanto's venture into the consumer field. For years Monsanto has been a big supplier of raw material—phosphate chemicals—to the soap industry. As a matter of fact, with about 35% of the national phosphorous output, it doesn't have to worry right now about customers.

But three competitors—Victor Chemical Works, Westvaco, and Shea Chemical Corp.—have been moving into phosphorous, and production has jumped appreciably. Hence, Monsanto apparently could see a long-range threat to its position as a raw material supplier.

With Lever now merchandising "all," will P&G and Colgate still be mad? The feeling is that they won't be nearly so angry fighting Lever as they were competing against their own supplier.



Part of Pasadena's plan—proposed by a four-man committee—is to convert its two most popular shopping streets into shopping parks, with moving sidewalks, trees, flowers, and fountains. Rear entrances of stores would lead to parking facilities.

Pasadena Wants It Both Ways

Like many other bedroom suburbs Pasadena has been acquiring industry and thriving shopping districts. Now it is planning to keep the process up without loss of residential tone.

F ALL the so-called bedroom suburbs dotting the landscape around Los Angeles, Pasadena has always looked preeningly on itself as the master bedroom. Close to Los Angeles but distinctly separate, it has nurtured the niceties of life—beautiful homes and gardens, a tradition of gracious living, the pageantry of the annual Tournament of Roses parade, and an addiction to culture. But since World War II there have been bewildering changes. Industry has grown rapidly in Pasadena, and this has drawn thousands of industrial employees into the population. At the same time, Pasadena has burgeoned as a quality shopping area for all the San Gabriel Valley. But traffic and parking problems, worsening all the time, threaten its retailing status. Many a U.S. suburb shares the same

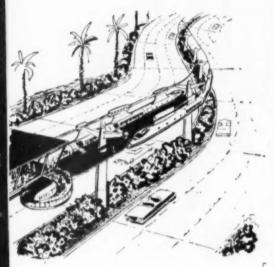
woes and wonders what to do about them before it's too late.

• Furrowed Foreheads—To Pasadenans—and many other suburbanites—the question is whether their city can cling to its residential and retailing prestige and still become a prestige center for business. This week, one answer was offered—a glimpse of what Pasadena might be like in 20 years (drawings, above and page 38). The picture includes shopping streets transformed into inviting parks—and a novel approach to industry.

The report, prepared for the Pasadena Chamber of Commerce, came out under the title Pasadena 1976. It was



Companies would conduct research and development in the new center.



Monorail speeding above freeways would belp solve transit problem.

the product of a year's brooding by a quartet of leading citizens: Henry Drefuss, the noted industrial designer; Dr. Lee Du Bridge, president of California Institute of Technology; Philip S. Fogg, chairman of the board of Consolidated Electrodynamics Corp.; and Walter S. Young, superintendent of Bullock's Pasadena department store.

• Target Set—The main goal of the committee's 20-year plan is to develop Pasadena increasingly as a center for electronics and other light industries, which use highly talented, highly paid personnel without contributing smoke or noise as a byproduct. In the past few years, Pasadena has had marked success in attracting such businesses. But now many of these companies are expanding, and the lack of elbow room within Pasadena's limits forces them to move away.

To retain the present installations and lure newcomers—the committee suggests building a great center for commercial research, probably adjacent to Cal Tech—which is already internationally famous in its own right. In tall buildings in a campuslike setting, companies could locate their research and development divisions. In keeping with a growing trend among scientific companies, production facilities would be elsewhere.

The committee thinks Pasadena has many advantages that make it a likely site for such a center:

 Cal Tech scientists and research facilities are right there.

Between Cal Tech and the electronics industry, there is already a climate of creative thinking.

Southern California has attractions of its own, such as the weather.

For its part, the center would enhance Pasadena's prestige as a business address and bring into the city people likely to appreciate its residential traditions.

• Unclogging the Streets—Along with a research center, the committee proposes ways to preserve Pasadena's status as a major shopping area for thousands of people in the San Gabriel Valley. It suggests diverting all traffic from two arteries of retailing—Colorado and Lake Streets—and turning them into shopping parks, with trees, flowers, fountains, and moving sidewalks to transport customers from one store to another. Rear entrances would lead from all stores to multi-story parking facilities, replacing the present overcrowded parking lots. This would help ease current snarls.

Recreational parks already surround much of Pasadena; the report suggests using them as the nucleus for a greenbelt to encircle the city. Smaller parks might be sprinkled through the community, and the increasing number of apartments necessary to cope with population might be zoned to face them.

The planners talk of piping recorded music into the parks at scheduled hours—Bach at one time, Rodgers and Hammerstein at another.

The committee—mindful of prospects for a four-day work week, and of Pasadena's many retired people—also proposes hobby workshops and adult education programs elaborate enough to include "far-reaching courses in the humanities."

• Travel in Space—On a perennial Southern California problem—transportation—the proposal is for a fast monorail system, suspended above the freeways, to speed passengers between communities and connect with local transit facilities. And, because the helicopter will probably gain in popularity, the committee suggests a number of heliports—perhaps initially for air taxis and the like, but eventually for private helicopters as well.

It's still much too early to predict how much of all this will come to pass. But the committee, instead of disbanding, will be continued, partly as a prod to action. And there does seem to be sentiment in the community to keep industry happy before it's too late.

New Auto Trend?

For second year in row, there has been no spring upturn in sales. Ford thinks new pattern may be emerging.

Two of the automobile industry's leading figures last week fixed public attention on a market phenomenon that has been one of the industry's major concerns in private for some time. General Motors Pres. Harlow H. Curtice and Ford Motor Pres. Henry Ford II conceded in reports to stockholders that for the second year in a row there was no marked spring upturn in new car sales.

• New Trend-Ford went further than Curtice. He speculated on the possibility that the spring upturn is a matter of history and that a new sales pattern may be emerging. "If a new pattern is developing which would distribute sales more evenly throughout the year," he said, "it might alleviate some of our scheduling problems and bring a greater degree of employment stability to the industry."

Curtice and Ford forecast 1957 industry sales at about 5.8-million.

It has been apparent since March (BW-Apr.6'57,p41) that sales this year were going to be far below the 6.5-million or so predicted by GM and Ford last fall. But not until Henry Ford got up before his shareholders last week was the industry willing to talk publicly about the possibility that a far-reaching and fundamental change is taking place in the business.

• Historic Pattern—You can get some idea of the dimensions such a change would assume by recalling that, historically, the automobile industry has turned out between 55% and 60% of its annual production in the first six months of each year. In years when new cars were introduced in the fall, production would rise sharply from about November, continue climbing through January, and peak out in April or May before sliding rather sharply down to the end of the model run.

This curve was geared to sales, of course. Sales normally ran under production in January and February, would overtake output in March or April, and outrun production in May and June. The industry had to start off the year with fairly heavy production to give dealers a backlog to carry them during the 45-60 day period when sales would be higher than output.

• Down Curve—Last year's output curve, however, resembled a ski slope from January on. The industry went into the year with high dealer inventories on the assumption that 1956 sales would be almost as high as in 1955. When it became apparent that was not going to happen, production, instead of rising, dropped from January's 591,000 to 474,000 in May, with only a mild rise from February to March to break the slide.

This year, production is following last year's pattern, but in a much gentler manner as the industry started with a more cautious inventory and has kept it under tight rein. January output was 642,000, dropping to 580,000 in February, 579,000 in March and 550,000 in April. May production is expected to be about the same.

At the same time, dealer sales for the first four months of the year have been about 3% less than for the same period last year. More startling, April sales—rather than being the anticipated 10% above March—actually turned out to be only about 515,000 as against about 530,000 in March. Before the war, March-April sales used to be at least 50% greater than January deliveries. Trying to be conservative, the industry this year expected a seasonal rise of 20% to 25%. Said Henry Ford last week: "Sales in March were only 9% better than in January."

• Prediction—Consequently, Ford estimates that January-June sales should be "just about 3-million." "Industry sales during the July-October period," he says, "may exceed those for the same period last year and recover at least part of the 3% deficit in cumulative sales for the first four months."

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Companies would conduct research and development in the new center.



Monorail speeding above freeways would help solve transit problem.

the product of a year's brooding by a quartet of leading citizens: Henry Drefuss, the noted industrial designer; Dr. Lee Du Bridge, president of California Institute of Technology; Philip S. Fogg, chairman of the board of Consolidated Electrodynamics Corp.; and Walter S. Young, superintendent of Bullock's Pasadena department store.

• Target Set—The main goal of the committee's 20-year plan is to develop Pasadena increasingly as a center for electronics and other light industries, which use highly talented, highly paid personnel without contributing smoke or noise as a byproduct. In the past few years, Pasadena has had marked success in attracting such businesses. But now many of these companies are expanding, and the lack of elbow room within Pasadena's limits forces them to move away.

To retain the present installations and lure newcomers—the committee suggests building a great center for commercial research, probably adjacent to Cal Tech—which is already internationally famous in its own right. In tall buildings in a campuslike setting, companies could locate their research and development divisions. In keeping with a growing trend among scientific companies, production facilities would be elsewhere.

The committee thinks Pasadena has many advantages that make it a likely site for such a center:

 Cal Tech scientists and research facilities are right there.

Between Cal Tech and the electronics industry, there is already a climate of creative thinking.

Southern California has attractions of its own, such as the weather.

For its part, the center would enhance Pasadena's prestige as a business address and bring into the city people likely to appreciate its residential traditions.

 Unclogging the Streets—Along with a research center, the committee proposes ways to preserve Pasadena's status as a major shopping area for thousands of people in the San Gabriel Valley. It suggests diverting all traffic from two arteries of retailing—Colorado and Lake Streets—and turning them into shopping parks, with trees, flowers, fountains, and moving sidewalks to transport customers from one store to another. Rear entrances would lead from all stores to multi-story parking facilities, replacing the present overcrowded parking lots. This would help ease current snarls.

Recreational parks already surround much of Pasadena; the report suggests using them as the nucleus for a greenbelt to encircle the city. Smaller parks might be sprinkled through the community, and the increasing number of apartments necessary to cope with population might be zoned to face them.

The planners talk of piping recorded music into the parks at scheduled hours—Bach at one time, Rodgers and Hammerstein at another.

The committee—mindful of prospects for a four-day work week, and of Pasadena's many retired people—also proposes hobby workshops and adult education programs elaborate enough to include "far-reaching courses in the humanities."

• Travel in Space—On a perennial Southern California problem—transportation—the proposal is for a fast monorail system, suspended above the freeways, to speed passengers between communities and connect with local transit facilities. And, because the helicopter will probably gain in popularity, the committee suggests a number of heliports—perhaps initially for air taxis and the like, but eventually for private helicopters as well.

It's still much too early to predict how much of all this will come to pass. But the committee, instead of disbanding, will be continued, partly as a prod to action. And there does seem to be sentiment in the community to keep industry happy before it's too late.

New Auto Trend?

For second year in row, there has been no spring upturn in sales. Ford thinks new pattern may be emerging.

Two of the automobile industry's leading figures last week fixed public attention on a market phenomenon that has been one of the industry's major concerns in private for some time. General Motors Pres. Harlow H. Curtice and Ford Motor Pres. Henry Ford II conceded in reports to stockholders that for the second year in a row there was no marked spring upturn in new car sales.

• New Trend-Ford went further than Curtice. He speculated on the possibility that the spring upturn is a matter of history and that a new sales pattern may be emerging. "If a new pattern is developing which would distribute sales more evenly throughout the year," he said, "it might alleviate some of our scheduling problems and bring a greater degree of employment stability to the industry."

Curtice and Ford forecast 1957 industry sales at about 5.8-million.

It has been apparent since March (BW-Apr.6'57,p41) that sales this year were going to be far below the 6.5-million or so predicted by GM and Ford last fall. But not until Henry Ford got up before his shareholders last week was the industry willing to talk publicly about the possibility that a far-reaching and fundamental change is taking place in the business.

• Historic Pattern—You can get some idea of the dimensions such a change would assume by recalling that, historically, the automobile industry has turned out between 55% and 60% of its annual production in the first six months of each year. In years when new cars were introduced in the fall, production would rise sharply from about November, continue climbing through January, and peak out in April or May before sliding rather sharply down to the end of the model run.

This curve was geared to sales, of course. Sales normally ran under production in January and February, would overtake output in March or April, and outrun production in May and June. The industry had to start off the year with fairly heavy production to give dealers a backlog to carry them during the 45-60 day period when sales would be higher than output.

 Down Curve—Last year's output curve, however, resembled a ski slope from January on. The industry went into the year with high dealer inventories on the assumption that 1956 sales would be almost as high as in 1955. When it became apparent that was not going to happen, production, instead of rising, dropped from January's 591,000 to 474,000 in May, with only a mild rise from February to March to break

This year, production is following last year's pattern, but in a much gentler manner as the industry started with a more cautious inventory and has kept it under tight rein. January output was 642,000, dropping to 580,000 in February, 579,000 in March and 550,-000 in April. May production is expected to be about the same.

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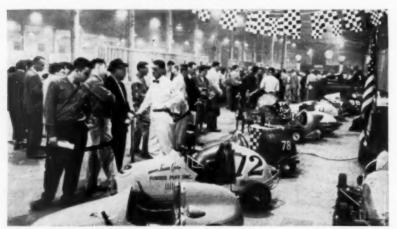
HOIST LADDER whisks a boy spectator upward. Ladder is meant to rush materials to roofer.



ILLUMI-PHONE has an attached clock to time calls. Inventor Mary Brusseau, right, is "metaphysicist."



BALL-WASHER invented by Paul Procario, left, can be attached to golfbag cart.



COMMERCIAL EXHIBITS included these Wolverine Quarter Midget cars, custombuilt for motor-minded children. With 2 hp. gasoline engines, they reach 25 mph.

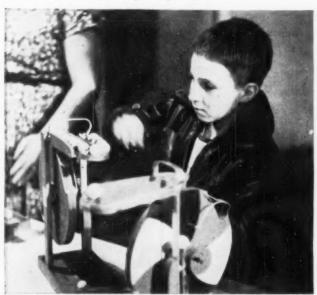
Field Day

INVENTORS, more accustomed to skepticism and rebuffs than to a welcome and an interest in their ideas, are having the time of their lives in Detroit this weekend. On Monday, the New Inventions & Gadgets Exposition (pictures) ends a 10-day stand at the Michigan State Fair Grounds after giving inventors a chance to find backers and manufacturers a look at potential products.

The show displays 210 inventions ranging from a slingshot fishing reel for lazy anglers to a portable burglar alarm that fires a gun. At midweek, nearly all the inventors reported at least one nibble from a manufacturer,



AUTO-PULLMAN replaces car seats, lets a passenger nap during a long drive.



PERPETUAL MOTION comes true as long as child keeps feeding marbles into action toy.



FOOT MASSAGE is offered to visitors to demonstrate Cycl-Massage machine.

for Inventors at Detroit Show

and many are talking to six or eight companies about their ideas.

 Patent Office Backing—The show is the brain storm of Bernic Smith, a young Detroit building materials salesman who used to be in show business. It has the blessing of the U.S. Patent Office which has representatives on hand to advise inventors and to see they aren't exploited.

"I got the idea for the show from seeing so much space in newspapers and magazines devoted to new products and inventions," says Smith, who with two partners invested \$80,000 in the exposition. To get back their money, the three men sold space at

\$2.75 a square foot to commercial exhibitors—an average 225 sq. ft. for 95 exhibitors. The inventors got space free, the only requirement being that they appear in person.

Most of the inventors came from Michigan, Illinois, and Ohio, but some traveled from as far away as California and New Mexico—many took their vacations in order to be on hand. Smith found them through newspaper advertising and a series of meetings in Midwestern cities. He pulled in the potential investors by sending complimentary tickets to every manufacturer in Michigan.

· Wild Ideas-Smith says his staff re-

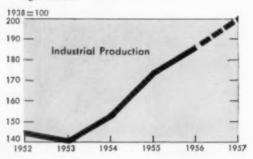
ceived 2,500 applications from inventors but screened out the zaniest ones. "One fellow," he says, "wanted to show a shirt with numbered squares that he said would- be a boon to backscratching. Another man had a rear-view mirror attachment for eyeglasses."

Still, Smith is showman enough to allow space for weird inventions that please the crowd. An elderly woman, for example, attracted attention with her design for a helium balloon strapped to the back, which she said would be ideal for escaping from hotel fires. However, the show staff put a crimp in her act—they refused to let her demonstrate it.

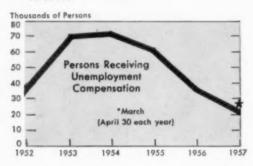
The French Paradox

This Boom

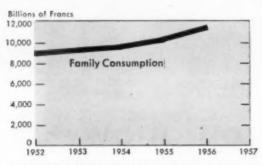
French industry is in a period of tremendous growth...



With over-full-employment for the French work force . . .



And a rapid rise, too, in living standards.



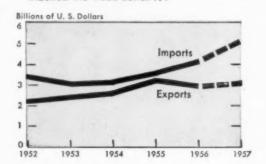
Data: International Monetary Fund. French Information Services.



But the Algerian war and welfare statism have boosted government costs . . .



While demand for imported raw materials has widened the trade deficit...



And almost wiped out France's foreign exchange holdings.



COUSINESS WEEK

Tough Job for France's New Boss

Whoever answers the "help wanted" plea from the vacant French premier's office faces three problems of critical importance to the world—European unity, Algeria, finances.

THE POLITICAL ferment in Paris this week was much more than the usual game of musical chairs among French ministers. To be sure, there was a

familiar ring to some of the details— Socialist Premier Guy Mollet had been toppled from power, and restive members of the National Assembly were far from agreement on who should be given the helm of France's 23rd postwar government.

But this time the stakes were much higher as Pres. Rene Coty—after hastily shelving plans for a Washington visit made ready to tap his first candidate for Mollet's successor as premier. It was plain to Paris observers that the next premier—whoever he is—won't be



How Mr. Friendly helped A. E. Staley grind out \$416,335 in savings!

Effective operation of a Staley-American Mutual designed safety program has brought this world's largest processor of corn and soybeans substantial savings in dollars and people.

They keep safety on the job daily at the A. E. Staley Manufacturing Co. of Decatur, Illinois. And in the last 7 completed years alone, the result has been savings for Staley of \$348.241 in reduced insurance premiums (difference between manual rates for the industry and rates actually paid), together with an additional \$68,094 in American Mutual dividends. Most important, though, are the human savings—the loss of life and limb avoided through accident prevention.

A forward-looking firm ever since A. E. Staley, Sr. founded it as a starch retailing business back in 1898, Staley's management has worked hand in hand with American Mutual Engineers for the past decade in setting up and operating an outstanding safety program.

Today, as a foremost producer of products from corn and soybeans for farm, industry and the home, the A. E. Staley Manufacturing Company is another example of the leading American firms who save through safety with Mr. Friendly's Company, American Mutual.



MR. FRIENDLY will gladly send you more information about how firms of all sizes and descriptions from coast to coast are profiting from American Mutual's service to policyholders. Just send your request to American Mutual Liability Insurance Company, Dept. BW-6, 142 Berkeley Street, Boston 16, Massachusetts.

American Mutual

Service from 78 fully staffed offices!
Savings opportunity from substantial dividends!

Mr. Friendly in American Mutual's trademark symbolizes the spirit of cooperation and service typical of American Mutual representatives everywhere.



able to evade a number of issues vital to the future of both France and Western Europe.

 Hurdles Ahead—The problems that await an answer are these:

 The Rome treaties, which set up the European Common Market and Euratom and now await ratification. If France scuttles them—as it did the European Defense Community three years ago—the whole movement toward economic integration of Europe would be set back, perhaps several years.

 The solvency of the French treasury. France's domestic budget is running heavily in the red, and gold reserves are dwindling rapidly (chart, page 42). If nothing is done soon, reserves will drop so low that devaluation of the franc will be inevitable.

 The struggle in Algeria. The current rigid policy toward Algeria doesn't seem to be bringing settlement any nearer. It was the new financial measures designed to cover the cost of Algerian fighting that brought Mollet's government down.

I. Trouble in Europe

The big question in Paris last week was this: Can any political group or coalition in the National Assembly face these problems any better than the Mollet government could? The answer, as so often happens in French politics, is full of hedges.

For example, it's hard to visualize any French premier pushing for ratification of the Common Market and Euratom agreements with Mollet's enthusiasm. But much of the spade work
has already been done. And while the
next premier may not be so ardent a
"Europeanist" as Mollet, he will find
it necessary to boost the treaties if
only to assure himself of Socialist and
Christian Democrat (MRP) support in
the Assembly. So, at least with the
present political lineup, the new French
cabinet can be expected to continue the

drive for European economic unity. · France First-Still, this doesn't guarantee that the drive will be successful, and it isn't much comfort to the other five nations planning to join the Common Market and Euratom. Since their fingers were burned on the European Defense Community (EDC), they are all waiting for France to ratify the agreements first. If the Assembly doesn't get around to deciding before the summer recess, then the whole ratification process will have to await the West German elections, and Chancellor Konrad Adenauer might lose some strength because of French inaction on his great ambition.

In the meantime, there's a standstill on negotiations to create a convention that would link the Common Market with the free trade area composed of other nations in the Organization for European Economic Cooperation—especially Britain and Scandinavia. London, now sold on European free trade as an advantage to the British economy, is impatiently waiting for a French decision. If France defects from the Common Market, there's a slim chance that Britain would take the lead in forming an OEEC free trade area. But this would mean an entirely fresh start on the whole program.

II. Trouble in Algeria

To many observers, the strangest aspect of the 16-month Socialist-led government of Mollet has been its tough Algerian policy. Shortly after taking office, Mollet had a brief go at a liberal attitude, but protest riots by French settlers in Algeria sharply altered this. Ever since, Mollet has re-fused to dicker with Algerian rebels until they lay down their arms. This policy vigorously enforced by the resident minister in Algeria, Robert Lacoste, another Socialist and ex-trade union official-has actually been the secret of Mollet's "staying power" in the National Assembly. The groups to the right of center favor the tough approach, and they have been delighted to let a left-of-center government carry it out. In return, the rightists gave grudging tolerance to Mollet's social program.

Under a new government, though, this "tit for tat" arrangement on Algeria may not hold up. The rank-and-file Socialists have never been comfortable about the party's position on Algeria. If the 100-member Socialist group in the Assembly should remain out of power, it will probably swing its weight back toward its earlier, more liberal attitude toward Algeria.

At any rate, the emergency powers granted to the Mollet government a year ago for use in Algeria expired with the government. This means that if the new government wants similar powers, it will have to ask the Assembly for them—and it seems unlikely to get them at the moment.

III. Trouble at Home

Any consideration of the Algerian question leads directly to the most frightening of France's major problems—the looming threat of a financial bust.

This problem will easily be the most pressing for the future premier, and it is in this department that many French observers feel the Mollet government really goofed. At any rate, the Assembly refused Mollet a vote of confidence on his financial policy.

The opposition came mainly from conservative deputies. For 16 months they had tolerated Mollet and his

Socialist Finance Minister, Paul Ramadier, only because they liked the tough Algerian line.

But when Mollet asked for new taxes to help pay heavy military expenses in Algeria, this same group balked. They claimed that Mollet's measures were unrealistic and that he was unwilling to slow down his social program.

· Balance Sheet-Mollet hoped to raise 150-billion francs in new taxes and slash 250-billion francs from the budget to ante 400-billion francs. But this would not have been enough to pay even the annual cost of the Algerian war. Repeated tapping of credits at the International Monetary Fund and European Payments Union has failed to keep the franc on an even keel. It now looks certain that Washington, London, and the IMF will refuse new credits unless the new French government disciplines the economy with a program to balance the budget, control inflation, and prepare for constructive devaluation. If the present drift continues, the result is likely to be forced devaluation by fall. That would bring only temporary relief, and it would probably delay French support of the Common Market even longer.

This week, it looked as if the new government would have to suspend the trade liberalization commitments France has made with OEEC until a more favorable balance of trade is restored. The commitments would affect about 83% of imports from OEEC countries. Of course, with the French Parliament also to be asked to ratify the Common Market, the timing is awkward.

• Last Resort—Paris financial circles figure that unless the trade gap narrows significantly before the Assembly's summer recess, the government will be forced to ask for permission to tap the last French resort—the \$860-million gold reserve held by the Bank of France. After this, there would be no choice but to devalue the franc.

With such a grim prospect in the offing it's no wonder that Mollet seemed almost willing to give up the premiership. Still, the first conclusion made after the fall of the government by Paris experts this week was that Mollet would probably be his own best successor. Whether he wants to and whether he would pay the price—getting rid of his finance minister, Socialist Paul Ramadier, in favor of someone more to the liking of the conservatives—is doubtful.

The betting in Paris at midweek was that on economic questions, the 23rd postwar government would edge to the right-but that it would look a great deal like the 22nd government on the matters of Algeria and European unity.



A contemporary artist shows Charles Goodyear's "moment of discovery" in 1839.

The Bettmann Archive

How did Charles Goodyear find a way to keep rubber from softening in summer, hardening in winter? He treated natural rubber with everything he could think of . . . cheese, soup, ink, salt, hundreds of other agents! Success came accidentally when he spilled some *sulphur*-treated rubber on a hot stove. And that's how vulcanizing came about.

Goodyear dreamed of rubber conveyor belts and washable banknotes. Today's wealth of rubber products would stagger even Goodyear's imagination, as would the complex modern production processes.

Taylor Instruments and Control Systems are used in the vulcanizing of rubber goods, from hot water bottles to huge tractor tires. For example, Taylor's FLEX-O-TIMER* Timed Program Controller is a mechanical brain that gives push-button operation of the complex sequence of all vulcanizing operations. It insures a uniform product, cuts costs, maintains maximum production from expensive equipment.

Taylor has been at work in processing industries since 1851, raising operating efficiency, cutting costs—and improving products. Taylor means quality control in chemicals, milk, rubber, steel, textiles and petroleum—wherever you measure and control key variables like temperature, pressure, flow, humidity, liquid level, speed, load and density.

Consultation with a Taylor Field Engineer costs you nothing—it may save you much. Taylor Instrument Companies, Rochester, N. Y., Toronto, Canada, London, England and Melbourne, Australia.

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Taylor Instruments

In Business

Appeals Court Punctures Goodrich Plea Over Patents on Tubeless Tires

B. F. Goodrich Co. is down-and maybe out-in its fight for court approval of its tubeless tire patents. A U.S. Court of Appeals in Richmond upheld a lower court dismissal of the patent infringement suit brought by Goodrich against U.S. Rubber Co. (BW-Dec.15

'56,p44).

Goodrich based its case on its use of an inner liner and rubber sealing ridges, and its shift to butyl from natural rubber to get the practicable tubeless tire that the industry had long sought. The Appeals Court held that the use of liner and ridges was merely a combining of old principles, hence not an invention. It likewise held that the shift to butyl was not patentable.

Federal Reserve Ditches the Plan To Take Credit Buying Under Its Wing

The idea of giving the Federal Reserve Board special power to control consumer credit terms is dead. White House and Federal Reserve agree there is no need for such legislation, and nobody in Congress is pushing

The plan has been under consideration since Pres. Eisenhower's 1956 Economic Report to Congress, which recommended a study of inflationary effects stemming from rapid expansion of installment credit such as occurred in 1955. A six-volume study conducted by the Federal Reserve's research staff (BW-Mar.23'57,p126); May 4'57, p50) concluded that installment credit is reasonably responsive to general credit conditions.

Beane Takes Over From Farwell At Underwood, Will Shift Policies

Cash-hungry Underwood Corp. got itself a new boss last week. Frank E. Beane, vice-president and controller for the office machine maker, is stepping up as chairman and chief executive officer. Gone-to a new job at IT&T, -is Fred M. Farwell-who left the presidency after a two-year drive to clean up the company (BW-Nov.17

Farwell had fought hard for improvement of product, sales, and efficiency, plus an invasion of the field of medium and small computers. With time and money both running short, he sought a solution through merger -first with IT&T, then with National Cash Register Co. (BW-Mar.16'57,p80). Both deals fell through, the second under attack by Beane and other stockholders who claimed the price was too low.

Now Beane-onetime stockbroker-plans to drop

expensive promotion of medium computers and concentrate on improved office equipment, plus the desksize computer, Elecom 50.

Reo Motors, Inc., has been bought by White Motor Co. for an estimated \$4-million. Both companies make trucks. Reo was a subsidiary of Bohn Aluminum & Brass Corp. This week, White Motor denied that it was also dickering for assets or stock of Diamond T. Motor Car Co., in which Bohn Aluminum is a large stockholder.

Money Investigation Held Up By New Search for Counsel

Donald C. Cook, former chairman of the Securities & Exchange Commission, this week turned down the job as counsel for the Senate Finance Committee's monetary policy investigation (BW-May25'57,p48).

Cook was reportedly eager to take on the assignment, but was overriden by the board of directors of the American Gas & Electric Corp., of which he is a vice-president. This means a delay in the start of the hearings that committee chairman Harry F. Byrd had hoped to open June 5. At midweek Byrd had a number of prospects for the counsel's job, hoped to get the hearings started by June 17.

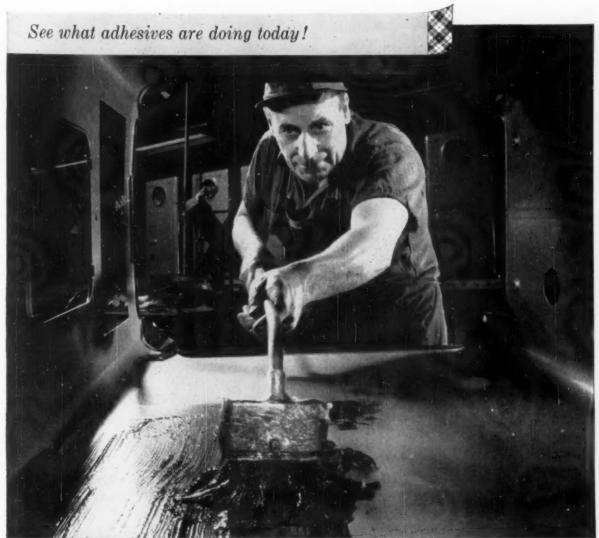
Business Briefs

Tennessee's anti-daylight saving law is headed for a final test in the state Supreme Court. Real estate and insurance man Albert H. Phillips, who turned his clocks ahead to test constitutionality of the farmer-supported law, says he will appeal the maximum \$25 fine imposed on him last week in Criminal Court. This ruling upset a General Sessions finding that the law was unconstitutional because it discriminated against business (BW-May18'57,p52).

The Internal Revenue Service said that cigarette smoking in March was 2% higher than a year earlier, while consumption of cigars was off 16%, pipe tobacco

Economic indicators: F. W. Dodge Corp. says construction contracts in April were 9% below the 1956 month, with residential building dropping 20% . . . Farm products sold in April grossed \$1.9-billion, matching the year-before month, says the Agriculture Dept. For the first four 1957 months, sales totaled \$8.4-billion, a gain of 3% Sales of life insurance in April were \$5,753-million, up 37% over the 1956 month, says the Life Agency Management Assn. . . . New orders for machine tools in April were \$51.3-million, lowest in two years and 35% below the year-before month, says the National Machine Tool Builders Assn.

The U.S. Plywood Corp. and nine wholesalers have been indicted on price-fixing charges by a federal grand jury in Detroit.



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Being interviewed is W. W. Smith, Divisional Manager, Product Engineering. Grids in back are of Exide's exclusive Silvium. Those in front are ordinary alloys.

"All of these alloys had the same acid test"

At the Exide Laboratories-Reporter: Was it a typical charge-discharge test normally used to test battery components?

> Smith: Right. And the two positive plate grids with no visible signs of corrosion are Exide's patented Silvium alloy.

> Reporter: How about the others-what alloys are they?

> Smith: They're standard alloys used in other well-known makes of batteries. But they don't have Silvium's corrosion-resisting ingredients.

Reporter: Where is Silvium used?

Smith: In the positive plates of all Exide-Ironclad and many other Exide Batteries.

Reporter: How does it affect battery performance?

Smith: Every test we've made proves it stretches battery life because the grid resists corrosion-sometimes up to 100% longer.

Reporter: Obviously this is an important feature of the Exide-Ironclad.

Smith: Yes it is, but it's just one of many engineering details that contribute to its high capacity and long life.

Note to battery users: Whenever you order heavy duty batteries or the equipment that requires them, be sure to specify Exide-Ironclad. For detailed bulletin, write Exide Industrial Division, The Electric Storage Battery Co., Philadelphia 2, Pa.

THE ELECTRIC STORAGE BATTERY COMPANY Exide

WASHINGTON OUTLOOK

WASHINGTON BUREAU JUNE 1, 1957



An individual income tax cut next year still is a good bet, despite all the discouraging news of the past 10 days.

There's a softening in White House thinking. It's brought on more by politics than any change in the spending-revenue outlook. The plain fact is that Eisenhower advisers are at last beginning to take note of the public's attitude on spending and taxing.

Eisenhower thinking up to now has been pretty well glued to the idea that a tax cut must wait until a few economic considerations are met. One, of course, has been that the danger of inflation must be passed. Another has been that the budget must not only be balanced, but that there must be a substantial surplus. Still another, a big one, at that, has been that the cut must be spread around—go to individuals, corporations, and the excise items. Now there's a change.

Politics will figure big in next January's tax decision. In fact, there's considerable feeling among Eisenhower's advisers that this, rather than the economics of the budget, should tip the decision.

So, watch for a political tax-cut proposal next January, coming from the President himself. You can begin now to anticipate what it will involve.

Individuals will get the first call. At best, the Administration will be able to figure only \$2-billion, \$3-billion, or maybe \$4-billion between income and outgo.

That may mean abandonment of the general cut idea. Individual relief of 5% to 10% would cost the Treasury between \$2-billion and \$4-billion in receipts.

A limited cut is considered highly possible. The current budget puts next year's surplus at \$1.8-billion. An increase of \$1-billion or \$2-billion would leave room for an individual tax cut. Optimistic officials say this size surplus can well result from a tight fist on spending and a rise in business activity.

As for corporation and excise rates, there's a feeling now that they will have to be left where they are—there's just not enough surplus in the picture to go around.

Congress will adjourn within six to eight weeks, barring some big and unanticipated emergency. That means the end of July at the latest.

The only "must" program is the appropriation bills. These are due for passage before July 1, the start of the government's new budget year. But it's seldom that Congress finishes out by then. A few will run over.

The economy battle in Congress will continue, despite White House claims that sentiment among voters is changing. Leaders in both parties agree that the Eisenhower schedule will be cut.

Now a word of caution on the cuts. There's lots of confusion over the annual appropriation bills. Many Congressmen think a vote to cut an appropriation is a vote to cut current spending.

WASHINGTON OUTLOOK (Continued)

WASHINGTON BUREAU JUNE 1, 1957

Here's how the budget is handled: When Congress passes on a President's request for funds, it is passing on (1) what will be spent in the upcoming fiscal year, and (2) authorizations that will commit the government to future spending—a sort of installment buying plan.

Most cuts made this year won't show up until later. For example, take the Internal Revenue Service—the tax-collecting agency. Its big expense is for manpower, employed currently. If IRS funds are cut, the reduction shows up quickly in the agency's spending. Defense is something else. Most of its funds are for future spending—the letting of contracts that may not be filled for two, three, or more years. So, when Congress cuts defense, say as much as \$2.5-billion, only a small part will show up next year. The remainder will show in subsequent years—maybe five years from now.

Keep an eye on next week's GOP session here in Washington. It may well determine what faction runs policy until 1960, the next Presidential election year.

Eisenhower leans to the liberal side—backs welfare and spending programs in the name of "modern Republicanism."

State and local leaders disagree, apparently. GOP National Chmn. Alcorn has been out holding meetings with local Republican leaders. When he added up his findings for the press, he said, in effect, that Eisenhower and his party are out of step.

This could bring a real showdown, but it probably won't.

Eisenhower is in no mood to give in to party conservatives. He has taken his stand, based as he sees it on the platform he was elected on last year. He frankly finds it hard to understand why members of his party in the House and Senate and about the land fail to agree with him.

The upshot probably will be a sort of standoff. Alcorn will report party sentiment as he finds it—the wish for lower spending so that taxes can be cut. And Eisenhower will go right on backing the things he thinks the party should stand for.

That will leave things in the hands of Congress, where the Democrats have a numerical control, but can't take advantage of it because of splits.

The conservatives (for lack of a better term) run things.

There's nothing new in that. Roosevelt ran Congress during his first term. But he lost control in his second term.

You now can see a similar situation firming up. The conservatives of both parties are moving more and more into a sort of informal coalition, with the result that the Johnsons (the Texas Democrat leader) and the Knowlands (the California GOP leader) run things. The Humphreys and Morses, on the Democratic side, and the Ives' and the Saltonstalls, on the GOP side, don't have very much to say about what goes on in Congress. That's what Eisenhower is up against. He can propose programs, but he can't assure their enactment. When you cut through all the maneuvering, it's what most Presidents have faced.

The American Market: a Look Ahead

The daily paper they never read

This daily paper is for housekeepingnot headlines. With it, homework is lighter . . . vacations a lot lazier.

On a fishing trip, for example, Dad packs the lake lunch in Waxtex, Junior polishes his reel with Northern "throwaway" facial tissue. Mom drains breakfast bacon on paper towels. Paper napkins protect "all hands" at fish fry time.

Small wonder Northern Paper Products play such a large part in today's pattern of living. And tomorrow the call for "convenience items" of paper will be even louder: more than a million new households every year-run by housewives who grew up with and demand work-saving paper products.

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Who'll Get Jet Engine Market?

Declassification of military models opens up the civilian market—and competition will be hot for the \$5-billion prize.

THE RACE to develop sales for the new jetliners such as the Boeing 707, the Douglas DC-8, and the Convair has almost obscured another phase of competition in the commercial aircraft business for the civilian trade. Orders are now in for 400 jet transports to be delivered between 1958 and 1961. To keep these planes flying takes an investment of about \$14-million in engines for each plane. The big question is, who will make these engines?

It is unlikely that commerical airlines will distribute their orders for engines the way they do for airframes. They have a way of picking one engine in a power class and sticking to it. That way, maintenance and parts control are simplified, and the engine manufacturer has enough replacement volume to warrant continued development and refinement of the engine. Also, the price of the engine goes down as yolume increases.

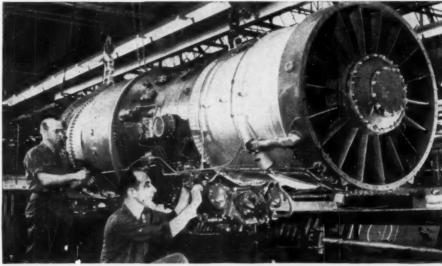
Few in the industry believe other manufacturers will permit Pratt & Whitney Div. of United Aircraft Corp.—which makes the J-57 currently powering the Boeing prototype transport—to run off with the market without putting up a stiff fight.

• At the Starting Post—It has been no secret that bigger and better engines than the J-57 are available to the military, but manufacturers couldn't offer them to commercial customers.

Last week, the picture changed, and the contest for the \$5-billion pie was officially opened. Military wraps were partially lifted on big new engines (pictures) by Pratt & Whitney and General Electric. And Curtiss-Wright brought out a new commercial power plant. Now order books are open, and from now on competition will be hot.

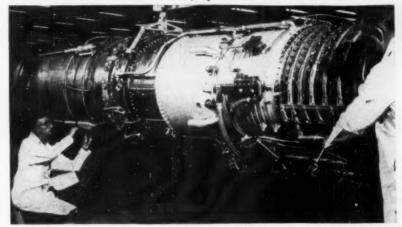
Release of Pratt & Whitney's J-75 and General Electric's J-79 had been expected for some time, and there had been rumors that Curtiss-Wright was working on a commercial jet engine. Even so, C-W's TJ-38, demonstrated last week, came as a surprise.

• The Favorite—Pratt & Whitney's J-75 is a twin-spool with thrust in the 15,000-lb.-plus range. The civilian version will be known as the JT-4. P&W claims that its long experience with the J-57 led to development of the J-75, which the company bills as the most



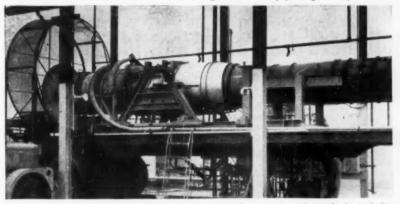
PRATT & WHITNEY'S J-75,

in the 15,000-lb.-thrust range, may have the jump in the race for the civilian market.



GENERAL ELECTRIC'S

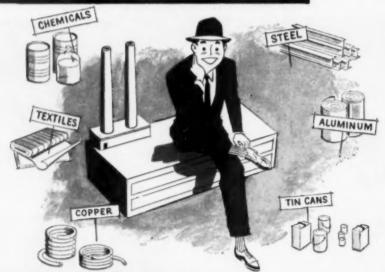
J-79, in the 10,000-lb.-thrust range, has the highest thrust-to-weight ratio of any jet engine in production.



CURTISS-WRIGHT'S TJ-38

is engineered to commercial standards, including a noise suppressor. It has a 12,500-lb. thrust.

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powerful production engine in the free world. Twin-spool construction means that two compressor sections are used, which rotate independently. This enables the engine to breathe efficiently at both low and high speeds without running into blade stalls—a turbulent flow condition that can strip the rotor and stator blades right out of the engine. Many industry observers think the J-75 has the jump on the competition at the moment.

• GE's Bid-General Electric's 1-79 is a 10.000-lb.-thrust-class engine that, according to GE, has the highest thrust-to-weight ratio of any jet engine in production. It has only one rotor, which permits cutting down the engine's diameter to a slim 36 in. GE designers got around the compressor flow problem by using variable pitch stators in the early stages of the compressor. By changing the angle of the stator blades, the engine will operate efficiently through a speed range of zero to Mach 2. The J-79 is also in production for the military, and is currently powering the B-58 Hustler bomber by Convair, and the supersonic Lockheed F-104 interceptor.

• New Entry—Curtiss-Wright's TJ-38 is a considerably different package and —as such—is a terrific gamble. But C-W's long experience with commercial engines may lead to a payoff—as did the company's Turbo-Compound, a piston engine that is credited with delaying the introduction of commercial jets. The Turbo-Compound powers the Super Constellation and Douglas

DC-7 The TI-38 is all done up in civilian togs, including a noise suppressing nozzle. The engine develops 12,500-lb. thrust with noise suppressor, and is known as a "derated" engine. By derating the engine, it can develop maximum rated thrust under all sorts of atmospheric conditions. The engine uses no water augmentation-a device to combat power loss on hot day takeoffs used by some military jets. Like the J-75, the engine has a twin-spool configuration. It's about 10 ft. long, and 41 in. in diameter. It operates at slightly lower temperatures than most military jets. The turbine inlet tem-perature is 1,340F, about 360F cooler than most military engines-which should prolong turbine life. The engine performs as it does, according to C-W engineers, because it handles a larger amount of air than most other engines. That keeps the temperature down, and also helps to lower the noise level by

reducing exhaust velocity.

The Curtiss-Wright engine won't be available until mid-1958, says Roy T. Hurley, vice-president of Curtiss-Wright. The engine is being tooled to U.S. specifications at the Bristol Aeroplane Co., Ltd., plant in Filton,



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England. If ordered, the engine will be produced in the U.S.

• Dark Horse—So far, Allison Div. of General Motors hasn't joined the jet fray, but it has an engine similar in power to the GE J-79 under military wraps.

Right now, Allison is most concerned with getting its big propjet engines in

commercial service.

However, the industry agrees generally that for long-range service, big jet engines in the power class of these power plants have the edge over other types, such as piston engines and propiets. A jet is faster because it depends solely on a high-velocity blast of hot gas from its tailpipe to develop thrust. Other engines, propjets for example, get their thrust by turning a propeller. On the other hand, they are more efficient at speeds and lower altitudes.

• Competitive—Though none of the manufacturers has put a firm price tag on its engine, all appear to be in the \$150,000 to \$175,000 range Since it takes four engines to drive a big transport—and to keep it in service, an airline needs just about an equivalent investment in parts and spare engines—airlines can figure a cost of \$1\frac{1}{2}\$-million

for engines for each plane. · Rush for Markets-There are other good reasons that engine makers are anxious to tie up the civilian market now. One lies in the very nature of big turbojets, which have to depend on the military to pay for development costs. A jet engine is one of the toughest and trickiest design and development problems ever tackled in industry. To build from scratch an engine similar to any one of the three now available would require the services of thousands of engineers for about five years. And you would have a development and tooling bill of about \$150million before your first engine came off the line. That's why few companies can gamble on developing a new commercial jet engine.

• Safe Bet—Another reason the engine makers are particularly anxious to get civilian sales is that this latest family of jet engines isn't likely to be obsoleted commercially by further military development. In the past, military and commercial engine needs have run nearly parallel. But more and more, the two types have tended to diverge as

the military went to supersonic speeds. Therefore, the J-75, J-79, and TJ-38 may be the last family of turbojets designed to operate in the speed range of commercial airliners. The next generation for the military will be aimed at high supersonic speeds, probably will be chemically fueled. So far, few people can see supersonic commercial airliners—with all the design complications and high fuel consumption such speeds would involve. END



For better service to you Jessop acquires **Green River Steel Corporation**

Green River Steel Corporation of Owensboro, Kentucky, one of the newest alloy steel plants in the country, now is a whollyowned subsidiary of Jessop Steel Company. This fact will result in benefits to the customers of both companies. If you buy steel from Jessop, you have been buying the broadest variety of top quality alloy, high-speed and stainless steels obtainable anywhere. Now with the splendid new and modern melting facilities of Green River in the picture, service from Jessop will be broader and quicker. If you are a Green River customer, you'll enjoy higher quality and more products and the benefits of the exclusive Dornin Process used by Green River which provides steel of unmatched forging qualities and grain structure. If you haven't been buying from either company, this is a good time to start. Write to Jessop.

These Jessop district offices and representatives can now service you with Green River Products

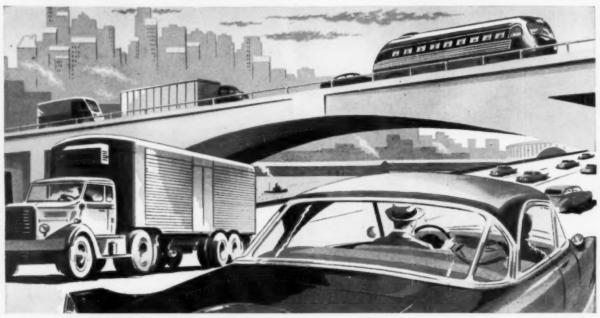
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Millions of vehicles depend on R/M Brake Blocks, Linings, Clutch Facings, and Automatic Transmission Friction Parts for dependable stop-and-go operation. Tough, flexible R/M Molded Rubber Cups, Boots and Diaphragms give long, reliable service in hydraulic and air brakes, as does durable R/M Rubber Hose. R/M Flexible Teflon Hose has many uses where heat and corrosion are problems. R/M Vee-Flex Packing Rings seal pressure in hydraulically operated attachments on trucks

and other vehicles. R/M products also go into the manufacturing machinery of the automotive industry—Poly-V drives and V-belts transmit power efficiently; industrial adhesives bond rubber, asbestos, metal and other materials; abrasive wheels help precision grinding; garments of Silvabestos cloth protect workmen from burns and abrasions.

Not only the automotive industry, but hundreds of other industries as well depend on the economical, reliable products and specialized skills of Raybestos-Manhattan. R/M keeps seven great plants and laboratories working in four big fields—asbestos, rubber, engineered plastics, and sintered metal. Take advantage of this experience. Talk it over with R/M if your problem involves any of these materials.

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Saving Highway Bumps—and Cash

That's the promise in continuous, jointless concrete pavement (above)—if present Pennsylvania tests work out.

The long, seamless strip of concrete the men above are laying may be a preview of the concrete highways you'll be riding in the future-roads without that constant bump, bump, bump that beats into your consciousness today as the wheels of your car hit against the evenly spaced joints in concrete pavement.

The strip shown in the picture is part of a tryout the Pennsylvania Dept. of Highways is making of concrete highway pavements laid in continuous, jointless ribbons. The U.S. Bureau of Public Roads, the American Iron & Steel Institute, and Lehigh University are also involved in the tests.

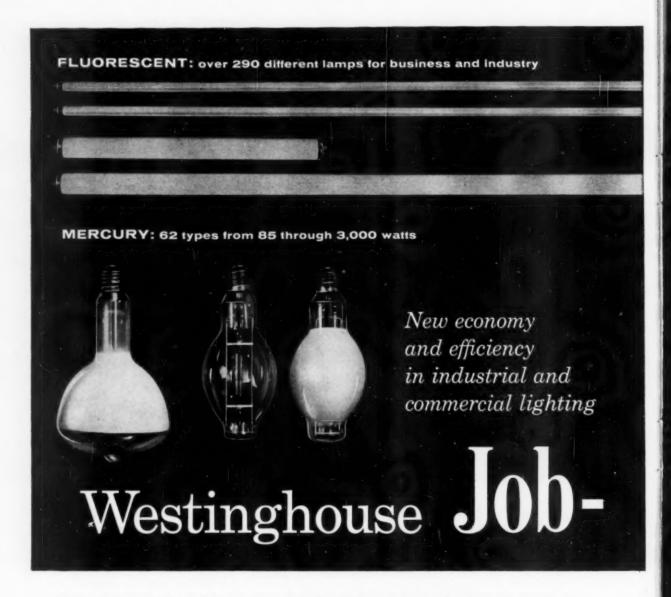
· Thinner-Smoothing out the ripples. however, is only one of several benefits that highway designers hope to gain from continuous pavement. They think it can be laid in thinner sections over thinner roadbeds than on today's standard highways, and hold up as well or better. Though such roads would take more steel, the savings in other materials could be notable.

That's why engineering eyes are on one particular part of the Pennsylvania tryout-a two-mile stretch of U.S. Route 22 at Hamburg, Pa. that has just been concreted. It's the first continuous highway section ever laid in varying thicknesses to test out just how thin a roadbed can be and still stand up under heavy traffic pounding.

Three years from now, after this stretch of road has gone through three full winter and summer cycles, engineers will have a fairly good idea of the practicality of thumpless roads made of -in. concrete ribbon-thinner by a 3-in. margin than most regular highways in use today. A definitive verdict will require still more time-the Bureau of Public Roads in Washington estimates that highways require at least 10 years of testing for a final judgment. · Joints and Cracks-The bump-producing joints that are built into most concrete highways today are put in, of course, to handle the expansion and contraction resulting from temperature changes. Such joints, at 35-ft. to 100-ft. intervals, control cracking and heaving by giving individual concrete slabs freedom to move back and forth as the temperature changes.

With continuous pavement, engineers reinforce the concrete with more steel, and let it crack naturally, as it does in profusion. But these transverse cracks are tiny, hairline affairs-ranging from less than 0.02 in, to 0.04 in, wide, They're so small you can't feel them under your tires, but they allow for the temperature changes. On the average, they show up between 2 ft. and 6 ft. apart. They are kept small by the tension in the steel reinforcing bars, engineers say, so that neither water nor dirt in any dangerous amount gets in.

That would eliminate one of the biggest headaches of highway departments



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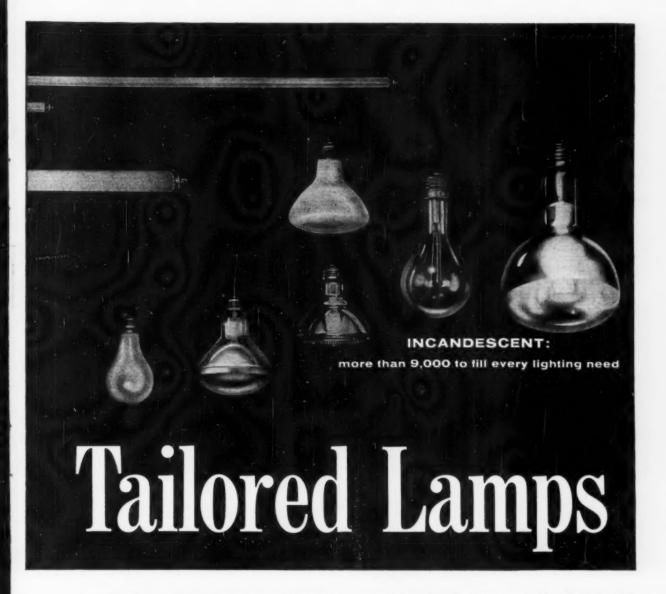
Fluorescent Lamps, for example, have a new highintensity phosphor—*Ultralume™*—which gives more lumens per watt plus uniform end-to-end light for the life of the lamp.

Mercury Lamps with special "hard" glass Weather Duty™ construction. Can't be harmed by snow, rain,

condensation-even without protective coverings.

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FORMS

ON HAMMERMILL PAPER

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• Earlier Tests—The continuous pavement idea has been a long time in development. The first full-fledged experimental strip was laid west of Indianapolis on U. S. 40 in 1938; since then, other test sections have been built in Illinois, New Jersey, California, and Texas. In both the Ohio Turnpike (BW—Dec.5'53,p120) and the West Virginia Turnpike (BW—May8'54, p194), concrete was laid continuously, but was later sawed into sections.

The two Pennsylvania sections, however—a two-mile stretch of Route 111 near York, laid last fall, and this spring's Hamburg stretch—are the most significant, particularly the Hamburg section testing various thicknesses. The York section is 9 in. thick, against the standard 10 in. (though some older roads, such as the West Virginia Turnpike, are 9 in.). The Hamburg stretch has sections 7 in., 8 in., and 9 in., with two depths of subgrade.

 Go-Slow Approach—Progress reports on earlier test highways are good. An engineering survey of continuous sections of the Fort Worth Freeway, after five years of use, found all the transverse

cracks still tight.

But highway engineers, a conservative lot, want to be sure. So motorists shouldn't expect much of the new \$50-billion federal-aid highway system to blossom out in continuous pavement. Most highway engineers are optimistic on "bumpless" construction—but they still want a lot of questions answered—particularly about the effects of the

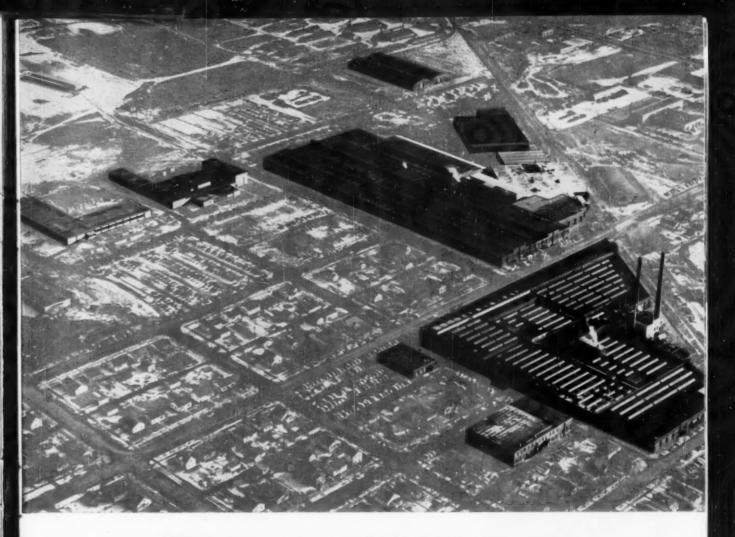
many tiny cracks.

Some concrete suppliers might like to move faster, to counteract ads plugging the "ribbon of smoothness" that comes with asphalt highways. Yet the Portland Cement Institute takes a goslow view, arguing that present bumpiness is exaggerated, that the bumps come not from the joint cracks but from "over-maintenance" by cramming in two much bulging asphalt as a sealer.

Continuous pavements are a bit more costly than the standard type. They take more steel (185 lb. per 100 sq. ft. against 73 lb.), but dispense with joint assemblies and joint-setting crews. The Route 111 job cost \$5.47 per linear ft., to \$5.25 for standard 10-in. paving. But the proponents say thinner, 7-in. continuous pavement can be built for \$4.45 per linear ft.—a good saving.

Other Ideas—Continuously reinforced concrete pavement isn't the only new paving idea being tried out. Jones & Laughlin Steel Corp. is working on an economical way of prestressing heavy-duty concrete highway slabs (BW—May11'57,p52)—to eliminate expansion joints.

END



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Designing and building hundreds of heating and power installations a year, qualified engineering firms can bring you the latest knowledge of fuel costs and equipment. If you are planning the construction of new heating or power facilities—or the remodeling of an existing installation—one of these concerns will work closely with your own engineering department to effect substantial savings not only in efficiency but in fuel economy over the years.

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As part of its current \$12 million expansion program at all locations, The Trane Company, La Crosse, Wis., a major air-conditioning and heating equipment manufacturer, has recently modernized its power plant. Steam generating facilities were changed over entirely to a coal-fired operation and a 70,000 lb./hr. boiler was added. Coal and ash handling is automatic.

Trane has found that burning coal the modern way pays off in several ways. Overall cost of steam generation is cheaper. Fuel supply is readily available and dependable. And fuel cost savings amount to 25% over the next most economical fuel, totaling about \$27,000 a year for the La Crosse plant alone.

For further information or additional case histories showing how other plants have saved money burning coal, write to the address below.

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*GPL's industrial-institutional TV system.



General Precision Laboratory Incorporated

Step-up in power opens new uses for tiny rivals of vacuum tubes; new materials may break "heat barriers."

Two recent developments in transistors indicate that this particular area of electronic technology is still moving

ahead in large jumps.

The biggest news is that Bell Tele-phone Laboratories have developed a power transistor for high frequency use that will make it possible to use transistors in high frequency radio transmitters (BW-Feb.2'57,p66). It opens up that possibility because it's capable of providing an output of five watts at a frequency of 10 megacycles. Previous power transistors have been severely limited in frequency range, and, like-wise, high frequency transistors have not been able to handle power.

• Fourfold Step-Up-At the middle of the frequency scale, Texas Instruments, Inc., is going into production on a silicon power transistor that can handle at least four times as much power as any power transistor presently available. Rated capacity—37.5 watts at a temperature of 25C and 15 watts at 100C-makes it a natural for transistorizing high-power audio systems and

Operating temperature range, from minus 65C to plus 150C, will open up a considerable number of rugged service uses, in missiles and geophysical exploration work, the company says. No frequency limits have been set, since developmental work is continuing, but' TI says it has tried out "up to five

servo amplifiers.

megacycles." TI's new silicon transistor is produced by a gaseous diffused-junction process similar in basic principles to that announced earlier last year by Bell Labs. Further refining is expected to open up even more uses for this transistor, such as completely transistorized high frequency communications equipment. · New Materials-The first silicon transistors are only about three years old. But already scientists are beginning to think in terms of other materials. A

Radio Corp. of America physicist re-ports that experimental transistors of other compounds can operate over a broad range of frequencies at temperatures 300 degrees hotter than the pres-

Gallium arsenide is the most notable example of the new compounds that are helping to push back the "heat barrier" now limiting the performance of present-day transistors and similar electronic devices, the RCA spokesman

said. END



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The long term market for newsprint must be evaluated in the light of growing industrialization of hitherto underdeveloped nations and the vast cultural improvements currently taking place among two-fifths of the world population who cannot now read or write any language. To keep pace with demand, the Bowater Organization is constantly enlarging and developing its production facilities in North America, Britain and Europe. The third new paper-making machine at the Calhoun, Tennessee mills is in operation, and a fourth is under construction. Ground has been broken for a Bowater pulp mill at Catawba, South Carolina. Six new ships are being built for the Bowater Steamship Company . . . This is the way Bowaters plan to feed the world's hunger for news.

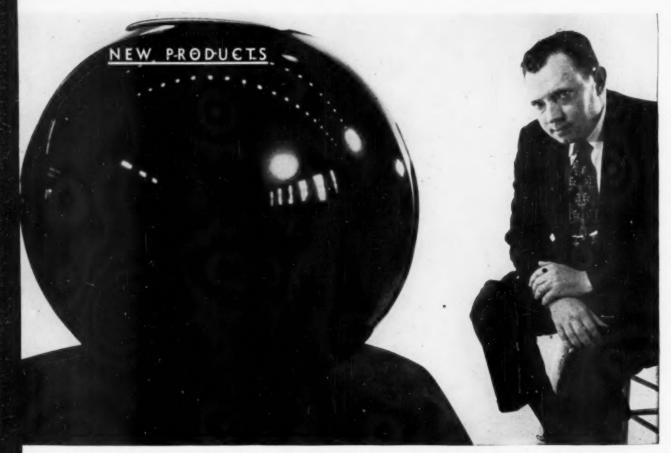
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Water-Based Paint Adds a Sheen

THE BALL in the picture owes its glow to a new water-based latex paint developed by Celanese Corp. of America.

Until now, most water-thinned latex paint has been flat, or at best semigloss. The new paint registers 75 to 85 gloss units on a gloss meter. Industry minimum standard for high-gloss paint is 75 units.

According to Celanese, development of the paint was due partly to selection of the proper wetting agents and protective colloids and partly to the production of extremely fine particles of resin for the emulsion. The particles are polyvinyl acetate resin, and are so small that 31-trillion can romp around on the head of a pin. When the resin particles are mixed with the wetting agents and protective colloids, the particles do not touch one another, but when the paint is spread, the water is dispersed and evaporates, and the particles fuse to form the glossy surface.

Like other latex paints, the high-gloss paint is easy to apply and dries rapidly. Also, it is washable, has no objectionable odor, and isn't a fire hazard.

Several paint manufacturers will draw

on Celanese knowhow to produce the paint for industrial and commercial use, and the company expects that other paint makers will soon be offering a high-gloss paint for the home market. Semi-gloss paints can be made from the same formulations.

Latex paint is the name given to the group of water thinned paints that first appeared in this country about ten years ago. They were made from a buta-diene-styrene or synthetic rubber base. The development came from Germany where a shortage of drying oils during WW II caused the search for a replacement.

Celanese says the cost is competitive with existing high-gloss paints.

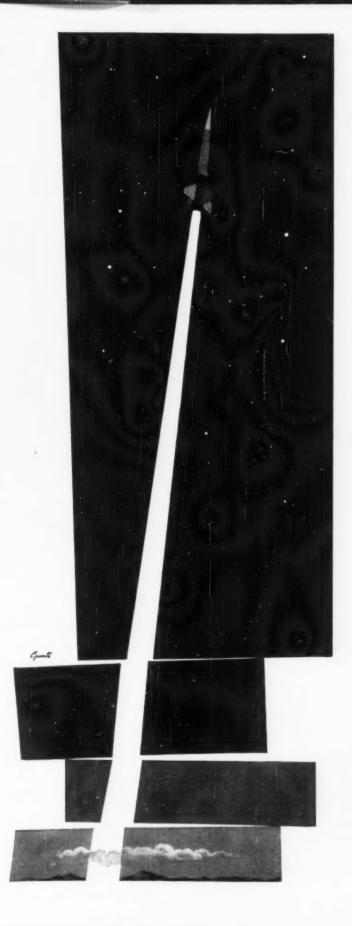
Portable Scaffold for Up-in-Air Jobs



This hydraulic scaffold mounted on casters weighs 860 lb. and fits in the back of a pickup truck. It has a lifting capacity of 800 lb. and lifts the 2½-ft. by 8-ft. working platform up to 10 ft. with a full load. Lowering and raising the platform is done by a hydraulic pump powered by ½-hp. electric motor controlled from the scaffold platform.

The scaffold is expected to be of special value to building contractors, interior decorators, painters, electricians, and industrial maintenance men.

Called the Jim Dandy Jr., it's marketed by Adam Co., Perry, Okla. Cost is \$450.



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Staid Chemical Giant Shifts Into Higher Gear



NEW PRESIDENT of Allied Chemical, Glen B. Miller is reshuffling the company to push it into the \$1-billion class.

In a break with its cautious past Allied Chemical & Dye is modernizing an archaic management structure, upgrading its products.

WHEN Allied Chemical & Dye Corp. was put together in 1920 as an amalgam of five existing companies, it knew exactly where it was going. It was the biggest chemical company in the country. With a wide assortment of basic chemicals, it had to grow as the country grew.

to grow as the country grew.

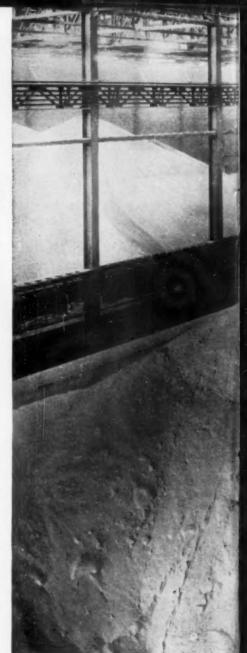
Allied has grown. It's \$669-million in sales last year puts it well within the top 30 companies in the U.S. It is still the world's largest producer of basic chemicals. But it's no longer the top chemical company. Du Pont and Union Carbide, with a gamut of new "intermediate" and direct consumer products, have passed it handily.

• Old Reputation—Over the years, Allied has accrued some unenviable reputations: for being "a bank with a fair chemical business on the side"; for being "15 years behind the industry" on research and new products; and for being probably the most conservative—and secretive—company in the country.

Allied has grown—almost in spite of itself. To do so, it has had to fight its own traditions—for production at the expense of research, for autocratic management, for cautious, penny-pinching inertia. Allied people today are voluble about past weaknesses. But within the past decade, a serious effort has been going on to correct them.

• Changing Order—Under a new president, Glen B. Miller, Allied's fourth in 37 years, the changes are coming even faster. Allied is blossoming out with a new management structure, a host of new upgraded products, sharply expanded research, and a plan to crack the circle of billion-dollar companies. Though most of the company's divisions—Barrett, Semet-Solvay, Solvay Process, National Aniline, General Chemical—are still far better known than the parent, the company is out to make the name "Allied" as well known for its products as, say, du Pont.

 Problems—But Miller has inherited a lot of problems along with the job of running a widespread company made up of seven divisions, over 100 plants, laboratories and mines, 3,000 products,



MOUNTAINS of sodium nitrate stored at

and some 32,000 employees. Chief among them are these:

• An unusual degree of vulnerability, for a chemical company, to swings in other industries. In one way or another, for instance, some 15% of all Allied's production goes to the steel industry. Declining farm income cuts into the company's important nitrogen business. And the current cutback in housing is hurting its important volume in building materials such as roofing and gypsum board.

 A product line on which the margin of profit is low.

· A declining earnings picture-



Hopewell, Va., testify that nitrogen products are still a big part of Allied's business in supplying basic chemicals.

first-quarter figures were down 21% from a year ago.

· An archaic and cumbersome top management setup.

I. Heritage

For the most part, these difficulties are rooted in the company's early history. The story starts almost 30 years ago with Orlando Weber, the company's first president. Though dead for 12 years, and absent from the company's helm for 23, his influence is still felt at Allied.

Allied was formed through consoli-

dation of five chemical companies-Barrett Co., General Chemical Co., National Aniline & Chemical Co., Semet-Solvay Co., and the Solvay Process Co. Weber originally was president of National Aniline. The combination included most of the basic chemicals used by most other industries, and all together, was the most integrated chemical combine of its time.

· Conservative Philosophy-Weber ran his combine with a ruthless and autocratic hand. Operating costs-and personnel-were chopped to the bone. For practical purposes, no research was done. Allied made what everybody else

needed, so why look for new products? As demand went up, the company just produced more of the same-and accumulated money. As the depression years rolled in, Weber played everything safe. No new chances were ever taken. He developed a compulsion for extreme secrecy that permeated the entire organization. Even divisional officers rarely spoke to each other. Some senior officers still lock all papers in a safe before going to lunch because "someone might come in and look at them.'

The Weberian pattern was followed intact by his successor, Henry F. Ather-

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". . . barring some cataclysm, Allied's profit picture should start showing considerable improvement soon . . ."

STORY starts on p. 68

ton, who was president from 1934 to 1946, chairman until 1949. Atherton kept a rigid hand, exercising control of the sprawling organization through the accounting department, which dominated Allied and still may have a disproportionate voice in its affairs. Fred J. Emmerich, who became president in 1946, chairman this year, came up through the accounting department—as did Miller, who became president this February.

• A Slight Shift-Emmerich's regime has been far less restrictive-and far more ambitious-than either of his predecessors. But Emmerich, too, has been essentially a cautious man. He has followed tradition in "cutting waste"—which usually meant trimming personnel-with every slip in business.

"We've never been guilty of hiring seven men to do one man's job," says a current official. "We always leaned the other way. We might not have made a lot of progress, but we haven't made an awful lot of mistakes either."

You get conflicting views of Emmerich. On one hand is the report that he would look at no problem until the group of vice-presidents came to unanimous accord on it. Though considerably less authoritarian than his predecessors, he was still a disciplinarian who would tolerate no mistakes. "And since no one wanted responsibility for something going wrong," says a top official, "even though we all had some very positive ideas, there was lots of inaction."

• Seeds of Change—On the other side is the fact that under Emmerich, Allied embarked on its first real expansion—\$644-million in capital expenditures in 10 years, and set the company on the road to upgraded products closer to the consumer. Many of the projects he started are just coming to fruition now, and Miller's administration should reap benefits from them.

It's generally agreed that in spite of its lack of research and its ultra-conservatism, Allied has moved upwards for three reasons: (1) production and sales ability on the divisional level, (2) general growth of the economy, and hence more demand for Allied's products, and (3) the company's reputation for top, unvarying quality.

In basic chemicals—ammonia, coke, caustic soda, chlorine, soda ash, nitric acid, hydrofluoric acid, aniline, urea—the company is not only the largest, but a basic supplier to most of its competitors.

• Low Profit Margin-But these are all low-profit items. And while the rest of

the chemical industry was upgrading into intermediate chemicals and even consumer products, Allied kept rolling on with the basics. Until the end of World War II, all emphasis was on production. That required a minimum of research—or organization. Over the past 10 years, both the research and the new product mix have increased and improved. Miller's first big task has been to tackle the organization.

II. Decentralization at Top

Allied top officials roost in great, bare high-ceiling offices at the tip of Manhattan. In another building a short two blocks away, the heads of the divisions and their staffs work. The two blocks have been called the "longest distance in the chemical business."

 Too Much Autonomy—Until a year or so ago, even the division heads on the same floor rarely conferred on mutual problems. In effect, each division acted as a separate company, as often in competition as in concert. Buying supplies outside the company rather than from other divisions was not unusual. There was no attempt at tie-in sales.

• Too Little Autonomy—At the top, the situation was the opposite. There were four vice-presidents, none of whom had any specific jurisdiction (although each had "areas of interest"). No one could make a decision without the concurrence of all the others. For instance, it would put Miller, essentially a financial man, in the position of having to determine the validity of every piece of research, of Forbes Silsby, a research man, deciding on financing methods.

 Reorganization—One of Miller's first moves was to reorganize his top echelon.
 The number of vice-presidents was upped from four to seven—with each having a specific jurisdiction, and autonomy in his field subject only to the veto of Miller. Characteristic of the old Allied, both the treasurer and comptroller hold vice-presidential rank. And characteristic of the new Allied, two research men also hold top-level spots.

Two other vice-presidencies set precedents for Allied: Carlton Bates as vice-president in charge of manufacturing, and George A. Benington, as vice-president in charge of marketing. It is the first time Allied has ever tried to coordinate these activities; and it is the first time any vice-president of the parent corporation has ever come up directly from a division.

Neither man is particularly a specialist in his new job. Bates was formerly president of the Solvay division, Benington came into Allied only three years ago, when Allied bought the Mutual Chemical Co. (specializing in chromium chemicals) which he headed. Both are in their sixties, due to retire within two or three years. But Allied men take satisfaction simply in the jobs finally being created—and the previously insurmountable barrier between divisions and headquarters being broached.

 Long-Range Planning—Other changes are going on up and down the line. Last year, for the first time, Allied asked its divisions for five-year projections on physical requirements, personnel, and product development. Recruiting, retirement, expansion, plant locations, communications all used to be handled on a day-to-day basis. This year a new executive committee was set up to handle them as long-range problems.

• Age Factor—Changes at the top may be only beginning, if only for reasons of age. Allied now has a policy of retirement at 65—although it's not yet applied across the board.

Last year, the board was increased from 12 to 16 "to bring in younger blood." Three of the four additions were in the 40s or 50s. But four directors on the board are close to or over 80—the rest are all well into the 60s. The executive committee is made up of "younger" men—the average age for the five-man group is only 64.

Miller himself is 62½ (he stresses the half himself), and now plans to retire when he hits 65.

• New Concepts—The new president has been with the company since its inception—he actually started as a chemist in the National Aniline Co. before the big merger, showed a flair for figures, and moved over to the accounting department of headquarters early in the game. But though he has trained under Weber, Atherton and Emmerich, he shows few of their characteristics.

Miller is unquestionably the most "delegating" president Allied has had. His desk is usually clear—because he bucks paper out as fast as it comes in, lets his subordinates have both the authority and responsibility for doing their jobs, and never worries about a decision once it's been made. In fact, one long-time observer of the company suggests that Miller's greatest strength may be that he is not a "strong man," rather is willing to let the talent that is in the company show itself.

III. Integration Down the Line

Meanwhile, as authority around the top is being clarified, administration down the line is being tightened up.

 Traffic Coordination—It's only in recent weeks that traffic has been inte-



grated. Under the old system, cooperation among the divisions was "voluntary." Some 5,000 tank cars, some 40 big barges, have been spread around the system, all assigned to some specific division. But if a division had no need for its tank cars, they sat idle—though another division might be clamoring for cars at that moment.

The company spends almost \$100-million a year on the railroads. But with no coordination, transportation bills were too high. Since the consolidation, all traffic clears through a single center, with an estimated saving on freight bills alone running some \$10-million a year.

Similarly, separate legal divisions have been coordinated, as has the treasurer's departments. That move alone has freed up substantial amounts of cash by cutting down to only those bank accounts really needed.

• Personnel Policy—The consolidations so far haven't caused any chopping of personnel—but with a high employee age level in administrative areas, natural attrition is leveling any excess.

So far there's been little transfer of men between divisions or between divisions and headquarters. One problem still is that most division men think of themselves primarily as, say, Barrett men, or Solvay men—but not Allied men. But interdivision rivalry is being eliminated—the creation of the Nitrogen Div. (1952) out of pieces of Barrett and Solvay helped.

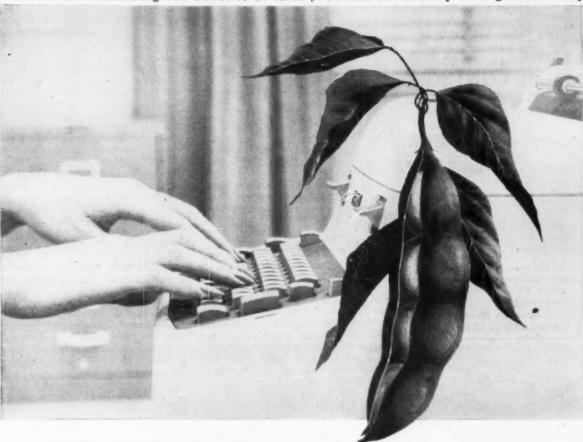
Now Allied has embarked on a deliberate program of filling vacancies from within the system, rather than within a division. The company is on an intensive hunt for talent at all levels. The combination of its own expansion, plus its early heavy-handed methods—and the brighter lures of some faster moving chemical companies—have pretty well drained the company's middle management levels. The old policy of letting the job develop the man has been dropped. To encourage development of executives faster a new rule has been promulgated: "No one gets promoted until he has a qualified replacement ready to step in immediately."

IV. Need for New Products

Meanwhile, Miller's got other problems to lick. For one thing, the company's earnings slid in 1956 almost 10% from 1955—and the decline accelerated in the first quarter of this year.

Last year the company was hurt by the steel strike. And nitrogen products, which still run over 10% of its total business, are off badly.

Allied is still the biggest producer of nitrogen products. Until a few years ago, when demand was outrunning supply, nitrogen also represented one CHEMURGY: Releasing the benefits of farm products to industry through chemistry



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Soybeans are 'way past the dream stage . . . developed by Glidden Chemurgy to the point where they improve products and reduce production costs for the manufacturers of nearly everything around you. From air conditioners to leather upholstery, your office is almost completely furnished with products upgraded with Glidden soybean derivatives.

From food to transportation, there is hardly an industry that does not benefit from the use of a Glidden soybean derivative. The Paper Industry, for example, employs Glidden-developed Alpha® Protein to improve the reproductive quality of all grades of printing paper. Alpha Protein helps produce whiter, more opaque paper for better reproduction . . . it also helps the manufacturer reduce production costs by permitting higher machine speeds thus increasing production. The printer benefits too, because Alpha Protein processed paper gives him faster press runs and reduces ink consumption.

And . . . Glidden is the *leading* soybean processor continuing operations beyond the crude products level to produce *special-purpose* derivatives that may help improve your product and reduce production costs. Call or write Glidden Technical Service for ideas and assistance.

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APPLIANCES
In rubber and plastic parts

CEILINGS AND WALLS
In insulation board and paint

FURNITURE In leather upholstery

SUPPLIES In paper and ink, varnish

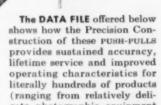
DECORATIONS In felt-base floor covering, and drapery textiles

> PERSONNEL In cosmetics, textiles



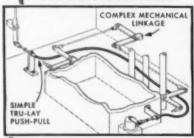
TRU-LAY PUSH-PULL REMOTE CONTROLS

make hundreds of products more useful...more salable



cate photographic equipment to the roughest and toughest dirt-moving equipment) to make them more useful... more salable.

Here is a picture of SIMPLICITY vs COMPLEXITY



Tru-Lay Push-Pulls are Simple ... have One Moving Part ... provide Lifetime Service, Lifetime Accuracy, Low-Over-All Cost and they are Noiseless. We have never heard of a Tru-Lay Flexible Push-Pull wearing out in normal service.

Mechanical Linkages, as shown dotted in the drawing, are Complex, have Many Parts, Many Points of Wear to create Increasing Back-Lash with Loss of Accuracy and Multiple Vibration Rattles.

The six bulletins and booklets in the DATA FILE

provide a clear picture of how the Flexibility of Tru-Lay Push-Pull Remote Controls simplifies Design and Assembly ...cuts costs for Engineering and Production,





AUTOMOTIVE and AIRCRAFT DIVISION AMERICAN CHAIN & CABLE

601-A Stephenson Bidg., Detroit 2 2216-A South Garfield Ave., Los Angeles Z2 929-A Connecticut Ave., Bridgeport 2, Conn. of the most profitable aspects of Allied business. But the total capacity for the U.S. has doubled since 1953, while consumption increased only 15%. Today nitrogen is in considerable oversupply. Allied is still making some profit on it because most of its capacity is comparatively low-cost. Its plants are still running at 80% of capacity, believed higher than the rest of the industry.

Because of the slipping position of some of its basic products, Allied is turning even more strongly to newer—and upgraded—products. For one thing, its annual research budget has been upped from about \$5-million a decade ago to roughly \$18-million this year.

 Nylon Venture—Its entry into new products has been beset with certain difficulties—like its experience with nylon.

Allied's "Caprolan" is closer to the German Perlon types than to the du Pont nylon, is based largely on its own research and development. So far, the company has sunk some \$35-million into it over 12 years.

When it went into the field, it looked like rich pickings. Allied already had the necessary raw materials, solved the chemical problems quickly and brilliantly—and then ran into trouble.

Both du Pont and Chemstrand, the other two nylon producers, had had years of textile experience with rayon before they turned to the new synthetic. Allied had not, but was cocky about its own ability, refused to hire the necessary technical knowledge on the fiber side. In the laboratory, its process seemed to work well. But when building a commercial-size plant, Allied engineered in processes that had not been tested in pilot stages, gambling that if they worked, it would save them several millions. Only they didn't work. As a result, there has been one plant delay after another.

Today Allied is turning out a heavy-weight nylon cord—particularly for auto tires—that it believes the best on the market, is selling at the rate of 100,000 lb. a year. So far, this is going mainly to test fleets—and Allied does not yet know whether the tire industry will buy its product in any quantity. For the fine deniers—the sort that go into fabrics—that make up the bulk of the potential market, Allied men concede they still haven't licked all their problems.

• Payoff Coming Up—But barring some cataclysm, Allied's profit picture should start showing a considerable improvement soon. The company started on the expansion pitch late—its first new plant in a decade didn't come till 1953. Miller estimates a new plant starts paying off after five years—and that cycle is just about to start.

The company has some \$50-million in uncompleted projects in the works,

another \$113-million in new installations which operated at a loss in 1956, but should be showing returns soon. That includes, among a dozen others, a new \$10-million plant at Buffalo to make polyethylene wax.

The polyethylene, unlike any other on the market, is one of the new hopefuls. It took Allied a while just to find out what it could do. Today its going into floor waxes, paper and textile coatings—and as an extender in plastic polyethylenes, taking up to 25% of the mix.

New Poly Resin—Allied also has developed a new low-pressure poly resin, particularly suited to plastic pipe, which the company believes will be better, and less expensive, than anything on the market, hopes to tap the big pipe market, even for oil and gas transmission where conventional polyethylene pipe cannot be used.

Allied is inching still closer to the consumer with its "Plaskon" line—a group of urea molding compounds that go into such things as "Melamine" plastic dinnerware. Although Allied makes only the resins—not the actual dinnerware—it spent almost \$400,000 last year advertising its customer's products to the consumer directly. And it chalked up a 47% sales increase on the product last year.

Gun Shy—But the company is leery
of getting too close to the consumer.
Allied made detergent chemicals for
years, and in the late 40's tried marketing its own household detergent, Swirl.
The effort died disconsolately in 1952.

Miller says they might try again—when and if they can come up with a product that is completely distinctive. "But if it's essentially the same as others have, we just don't have the marketing knowledge, talent, or resources to buck outfits, like the soap companies, that are experts at it."

New Fields—The company, nevertheless, is branching out further. It is moving strongly into the growing field of urethanes—rubbers, foams, and adheritese

And it's straying into even more esoteric fields. Under construction is a multimillion dollar plant to refine uranium salts for the Atomic Energy Commission. Today the new Allied is not only talking more freely internally—but it has so far broken its former secrecy fetish as to take a partner in a \$40-million joint venture with Kennecott Copper to produce titanium.

• Prospect—By the end of this year, when all its current projects have come in, the company will have the physical capacity to do an annual business of around \$900-million. Miller doesn't think it will be long before the physical capacity is translated into actual sales. And still newer products planned, but still to come in, should boost them up over the \$1-billion mark. END



There's no "dead-track drag" on turns to limit the TD-24's pulling capacity!

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Fast maneuverability and positive load control assure steady production even in closest quarters!

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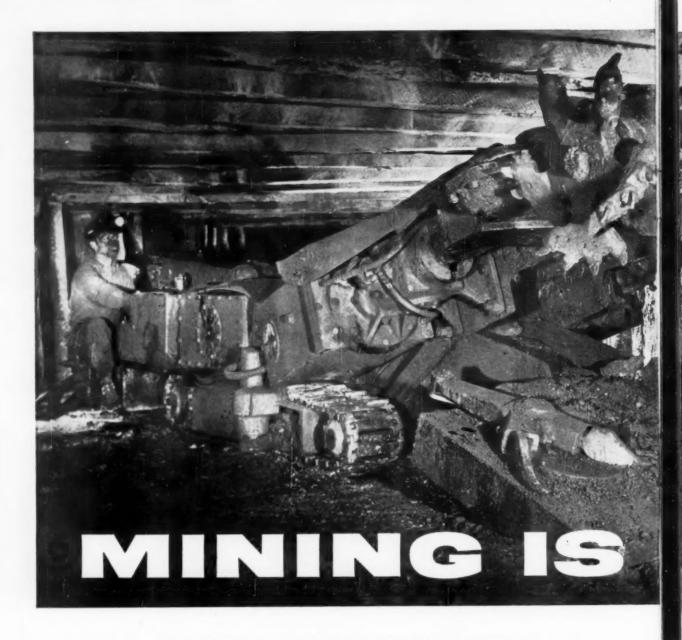
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1. In coal, per-man per-day output now averages close to 11 tons, compared with 7 tons five years ago, and 1½ tons or less in European mines.

 Coal is increasing its mining efficiency at a rate of 10%, in comparison with a 3.5% allindustry average.

3. Capital expenditures in coal will top \$300 million annually each year until 1960.

4. Near Blind River, Ontario, just north of Lake Huron, 8 uranium milling plants and 11 mines are being pushed to completion under government purchasing contracts totalling almost \$1 billion.

5. Taconite mining requires 10 times the investment of ordinary iron mining . . . will ante up \$500 million more by 1960 to supply iron ore demand.

 New ore mining projects announced during 1956 alone called for expenditures of \$1.9 billion —yes, billion.

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Automation at work below ground—with one of the new types of continuous miners—has revolutionized coal mining by raising output as high as 100 tons per man-day.

goals . . . for standard products as well as new developments . . . mining is the place to look. It's a market few companies can afford to overlook. If your products do any of these things—handle or move coal or ores underground or above; process, clean, concentrate, refine or smelt; automate, control or save labor—your company can grow with mining.

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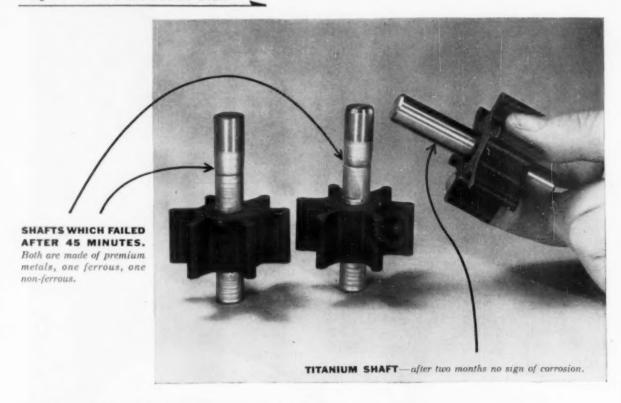
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on your company letterhead, requesting data on coal mining and mining. Or request a representative to call with this informative material.

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COAL AGE

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TITANIUM PUMP SHAFT LASTS

... where other metals corroded in 45 minutes

The problem was to pump ferric chloride, an acid used in etching printed circuits in electronics manufacturing. Jabsco Pump Company, of Burbank, California, sought to develop a pump to handle this highly corrosive acid, and replace batch handling.

Premium metals were tried for the pump shaft (the impeller is neoprene and the casing is plastic), but corrosion around the seal almost immediately led to leakage and failure. A glass shaft did not have sufficient strength. Then, using Mallory-Sharon commercially pure titanium for the shaft, the problem was solved permanently. Titanium has outstanding resistance to chlorides.

The cost figures here are illuminating. The pump with the titanium shaft cost about double the pump with the ferrous metal shaft . . . and about the same as the pump with the other non-ferrous metal shaft (because of machining difficulty with the latter). So first cost of titanium is lower than you may think. And titanium paid for itself in 90 minutes.

Let us help you apply titanium to

your corrosion problems . . . our service engineering group will be glad to assist. For information, write Dept. Q-6.

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In Management

College Alumni Ante \$106-Million In Record Giving to Alma Maters

Aid to education got a boost last year—from college alumni. Their gifts to 442 institutions added up to \$106-million, a new high. Top recipients, according to the American Assn. of Fund-Raising Counsel: Yale, \$11.2-million; Harvard, \$9.2-million, and the University of Chicago, \$4.4-million.

Corporation gifts to educational institutions have yet to be tabulated. But they're expected to bear the same level. In 1955, the total was \$80-million.

Education's best friend was the Ford Foundation, which granted close to \$558-million during fiscal 1956. Of that figure, \$164-million went to help education.

Evolution Better Than Revolution In Revamping an Acquired Company

"Easy does it" is the best advice for integrating sales programs of recently acquired companies, says B. K. Wickstrum, vice-president for marketing of Sylvania Electric Products, Inc.

A rush to initiate radical changes in a new acquisition can create many more problems than it solves, he told 21 businessmen at the National Industrial Conference Board.

Sylvania's experience in learning to live with acquisitions has ranged from small supply facilities to large end-product manufacturing and marketing organizations. In several instances, the new family member has had distribution policies radically different from Sylvania's in a related field. Sylvania, though, doesn't try to reconcile the differences.. Says Wickstrum: "As long as each of them is successful, why disturb them?" Eventually, he says, the differences will disappear.

Foreign Companies Ruled Tax-Exempt If They Do No Business in the U.S.

If a foreign company takes out a license to operate in one of the 48 states—but actually conducts no business there—it isn't subject to U.S. taxes. So said, in effect, the Tax Court of the U.S. when it tossed out an Internal Revenue Service case against Premium Iron Ores, Ltd., a Canadian concern; Midwest financier Cyrus Eaton; and an Eaton associate, William Daley.

A decision the other way might have meant tax troubles for two types of businesses:

Independent companies in Canada with some U.S. contacts.
Wholly Canadian subsidiaries of U.S. companies,

with U.S. liaison offices but doing no business here.

IRS claimed that Premium—a sales, research, and finance subsidiary of Canada's Steep Rock Iron Mines, Ltd.—had a permanent U.S. establishment because of a license to operate in Ohio and letterheads showing the same address as Otis & Co. (Eaton's outfit in Cleveland). It was trying to collect some \$2-million from Eaton and Daley as tax payments and penalties on capital gains from a deal in which Premium bought 1,437,500 shares of Steep Rock stock at 1¢ each. At the time, Steep Rock was selling at \$1.67 a share on the open market. Failing that, it wanted to tax Premium.

The court ruled no, on both counts. Premium had no "permanent establishment and was not taxable" since it did no business in the U.S. and eventually gave up its Ohio license.

Employees Said to Work Better If Supervisor Shies From Dogma

The job of a top executive will change more in the next 10 years than in the last 20, according to a leading motivations researcher, Rensis Likert, director of the University of Michigan Institute for Social Research. In the process, he says, some new and different ideas on management will evolve.

Until now, management has tended to apply formulas successful in improving production to the programing of personnel. But, says Likert, this approach doesn't work. Research indicates that the executives and supervisors who stimulate the greatest productivity and satisfaction—and the lowest turnover—among employees consistently ignore company dogma on methods.

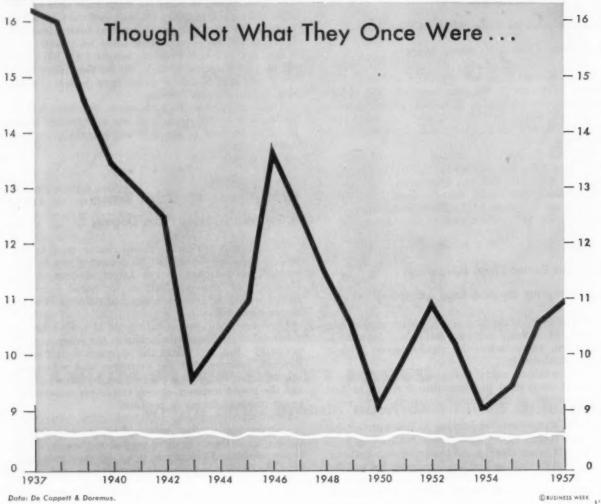
Likert says some management men realize, consciously or unconsciously, that salary—although important—doesn't tap all the motivations needed on the job. They bypass established procedures to set up their own, and often the result is higher productivity from a work force.

Management Briefs

Tired feet lead to ruined sales, lowered morale of employees, and plant accidents, according to statistics gathered by the National Assn. of Chiropractors. Aching dogs cost U.S. industry \$125-million a year, says the trade association.

Correction: Salaries for three top officials of Union Carbide & Carbon Corp. for 1956 are as follows: Morse G. Dial, president, \$300,000; Howard S. Bunn, executive vice president, \$166,667; Kenneth H. Hannan, executive vice president, \$96,667. Last week it was incorrectly stated that additional compensation of \$83,386, \$65;325, and \$37,990 had been paid to them respectively. These amounts, however, are only credits established under contributory and non-contributory pension and retirement plans. As a result, the statement that Morse Dial had an increase from 1955 to 1956 of more than \$100,000 was a wrong interpretation since his 1955 salary had been \$262,500, making the increase \$37,500.





Odd Lots Are Still a Big Deal

The apparent decline is largely due to stock splits and the rise of mutual funds. Two houses handle all the odd-lot trading on the New York Stock Exchange.

As THE CHART shows, there aren't so many odd-lot transactions as there used to be. Twenty years ago, 16 shares of common stock were traded for every 100-share round lot bought or sold on the New York Stock Exchange; so far this year, it's about 11 shares.

Nevertheless, trading in odd lots is bigger than you might think from this apparent decline. April trading volume on the Big Board came to 48-million shares, but another 5-million or more

shares changed hands in odd-lot deals.

Collectively, investors who buy or sell in odd lots still carry a lot of weight. An estimated 8.6-million people own stocks, and the great majority of these can't afford to buy most stocks in round lots of 100. Around three out of four stock investments are made in odd lots; 95% of AT&T stock is owned by people who have less than 100 shares.

· Then Why the Decline?-There are

good explanations for the decline in number of odd-lot shares traded per round lot. The most obvious one is the rise of the mutual investment funds, which take the business that the small investor might have done directly on the odd-lot market. Ten years ago, these funds had less than \$14-billion worth of shares outstanding; now they're past \$9-billion.

Another factor is the growth of regional stock exchanges. These handle many local orders for odd lots that used to be forwarded to the New York exchange for execution.

Still another reason is a technical one: the popularity of stock splits. Thus, if stockholders of Virginia Ry.

We hate to admit it but we had trouble with a

Bellows Air Motor

in Reading, Pennsylvania

Bellows Air Motors — the unique air cylinder with the built in valve — have established enviable records for trouble free performance. Operating cycles of 20,000,000 to 30,000,000 without maintenance of any kind are quite common. Fifty million cycles nothing unusual.

But trouble sometimes occurs — even in the best regulated families. A few weeks ago we received a phone call late at night. A Bellows Air Motor on an important production line had gone haywire. Could we ship a replacement immediately? We did better than that. We had a Bellows Field Engineer at his plant at 8:00 the next morning. At 9:00 the line was back in operation.

More than 125 Bellows Field Engineers (one or more in every major industrial area in the United States and Canada) are your assurance that if you ever do have trouble with any Bellows equipment it will be remedied quickly with minimum down time. (But between us girls, trouble with Bellows "Controlled-Air-Power" Devices is most unusual!)

The Bellows Co.

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MANUFACTURERS OF CONTROLLED-AIR-POWER DEVICES FOR FASTER, SAFER, BETTER AND LOWER-COST PRODUCTION

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1,050,223 Shares

International Business Machines Corporation

Capital Stock

Rights, evidenced by subscription warrants, to subscribe for these shares are being issued by the Corporation to the holders of its Capital Stock, which rights will expire at 3:30 P.M. New York Time on June 10, 1957.

Subscription Price \$220 a Share

The several underwriters may offer shares of Capital Stock at prices not less than the Subscription Price set forth above (less, in the case of sales to dealers, the concession allowed to dealers) and not more than either the last sale or current offering price on the New York Stock Exchange, whichever is greater, plus an amount equal to the applicable New York Stock Exchange commission.

Copies of the Prospectus may be obtained from only such of the undersigned as may legally offer these Shares in compliance with the securities laws of the respective States.

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THE FIRST BOSTON CORPORATION KUHN, LOEB & CO. DILLON, READ & CO. INC.

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STONE & WEBSTER SECURITIES CORPORATION DEAN WITTER & CO.

May 22, 1957.

approve a pending 2½-for-1 split, an investor who today wants to buy only 40 shares will be able, after the split, to buy a round lot of 100 shares for the same money.

Despite current high market price levels, the average price of shares listed on the Big Board stands today at \$49.60, compared with \$64 in 1946. This largely reflects stock splits, and the same splits have turned many odd-lot holdings into round lots. Besides, prolonged prosperity has permitted many investors to accumulate odd lots-that, when sold, amount to a full round lot or more.

I. Specialized Dealers

Up to about 1867, stocks were traded on the New York Stock Exchange in one big auction. The exchange president loudly called the name of each issue in rotation; the brokers shouted out their offers and bids. These differed not only in price, as they do today, but also in quantity.

As trading activity multiplied after the Civil War, brokers began to deal in 100-share lots, and various posts on the floor were set up for the trading of specified stock issues. Odd lots were left out in the cold—for a while they were traded only at severe discounts in the over-the-counter market.

In 1874, the Big Board firm of Jacquelin & Doremus decided to go after this business right on the floor of the Exchange, and today's odd-lot trading practices began to evolve. Jacquelin & Doremus was the root of the two big odd-lot specialists of today: De Coppett & Doremus and Carlisle & Jacquelin.

 Behind the Scenes—Probably only a handful of the nation's investors have ever heard of these two houses, though practically all have done business with one or both at some time.

The odd-lot dealers never meet investors face to face. Their customers are the Stock Exchange member brokers who act as agents for the investors. The dealers collect a small markup for serving the brokerage houses. This differential is included in the investor's price per share, but his purchase confirmation slip in an odd-lot deal doesn't show this detail.

The two odd-lot houses operate only on the New York Stock Exchange and in stocks listed there. On the American Stock Exchange, odd lots are handled by the specialists; in the over-the-counter market, there is no odd lot or round lot—orders for five shares are handled the same as for 100.

• Round Lot of Seats—Each of the two odd-lot dealers—they are about the same size—owns around 50 seats on the New York Exchange—far more than any other Exchange member. Each maintains at least two dealers at each of the Exchange's 18 posts throughout the trading hours. In order to handle the business that comes their way, each has to keep on hand an inventory of stocks that may run as high as \$2-million or \$3-million in market value.

The two firms are required to stand ready to buy or sell shares of any listed stock in parcels of 99 shares or less (5, 10, 25, and 50 are the most common multiples).

If a dealer's supply of a stock gets low, he may buy round lots to replenish it, or he may simply decide to stay "short" for a while. If a flood of sell orders comes in, he will absorb them and in turn dump some round lots on the market.

In rapidly rising or falling markets, the odd-lot houses often take a loss on these transactions. But in the long run, they know they will make a living from their commissions—12½¢ a share on issues selling for less than \$40, 25¢ on shares selling at \$40 or more. The spread may be wider in issues that are traded in 10-share lots, mostly preferred stocks.

 Rivalry—Although the Big Board's odd-lot business is handled entirely by the two big houses, they compete vigorously between themselves. This competition involves a host of services ranging from speed of execution and clearing of orders down to the reporting of trade gossip from the floor.

Merrill Lynch, Pierce, Fenner & Beane, the world's biggest brokerage house (last year it handled nearly 20% of all odd-lot activity on the Big Board), impartially alternates its business between the two dealers in periods of about two months each.

II. How They Operate

Odd-lot orders are filled at a price based on the next round-lot transaction. When a broker receives an order, for example, to buy 20 shares of Texas Co. common, he relays it to an odd-lot dealer at Post 3 on the exchange, where that company's shares are traded. The order is filled whenever the next round-lot transaction in Texas Co. shares is made by brokers gathered at Post 3. This may happen immediately or not for several minutes, depending on how active the stock may be at the moment.

When the deal comes—one day last week it would have been at \$70—the odd-lot dealer fills his buy order at a cost to the investor of \$70.25 a share, which includes his 4-point markup. Or, if the investor had been selling, the dealer would buy the odd lot at \$69.75 a share.

Had the order been for Yale & Towne, which is also handled at Post 3, the dealer would have added or

deducted an & point from the price of \$29 a share, since the issue is selling at less than \$40.

• Paperwork—The odd-lot dealers must move a mountain of paperwork in carrying on their business. They must keep on hand enough stock certificates of various denominations to be ready to transfer thousands in a day. They get no help from the Stock Exchange's Clearing Corp., which handles only round lots.

Economics—While it is always cheaper on a per-share basis to buy a round lot than a smaller amount of the same stock, it is sometimes cheaper to buy an odd lot of one issue than a round lot of another, lower-priced issue.

For example, the combined broker's commission and odd-lot differential for buying 20 shares of Alcoa, selling at around \$100, is no more than for 100 shares (a round lot) of Loews, selling at around \$20. And the cost of acquiring either (about \$25) is less than the commission of about \$40 on 400 shares of Conde Nast at \$5.

III. Worth Watching

Besides playing a vital role in executing odd-lot orders, De Coppett & Doremus and Carlisle & Jacquelin perform other valuable services. They keep the only detailed, time-stamped records of exactly when each round-lot transaction occurs. Brokers frequently rely on these records in adjudicating customer disputes regarding execution of round-lot orders. Finally, the odd-lot houses provide daily and monthly statistics on odd-lot trading volume which are useful to many a professional market-watcher.

• Always Wrong?—It's a time-honored theory on Wall Street that the collective sentiment of odd-lot investors is usually woefully wrong. During a rally, they tend to sell until the end of the rise, when they start buying frantically in a miff over opportunities already lost; in a decline, they tend to sell in panic only as the market nears bottom.

This is the theory, and some shrewd professional traders used to think they could make money whenever they could correctly identify a "crucial market juncture"—and then do the opposite of what the odd-lot traders were doing. If this were true, the professionals would be selling now. Odd-lot purchases have exceeded sales each month this year: by 40% in January, by 30% in February, by 23% in March, by 15% in April, by 12% in May.

However, Wall Street has been taking the theory for years with a grain of salt. Since the bull market began in 1949, the odd-lotter has often proved smarter in his diagnosis of the outlook than many an old "pro." END

No Taxes to Pay

Mutual funds for municipals, with tax free dividends, wait only Congress O.K.; one jumps gun as closed-end trust.

There's a growing movement in the securities business which if successful could well expand the market for bonds of state and local governments and even tend to lower the cost to them of their current heavy borrowing programs.

The idea is to set up for public subscription mutual-type funds and trusts that would invest only in tax exempt municipal bonds, and whose dividends to stockholders would be free of federal income tax levies.

According to its sponsors, this would tap a segment of the investing public that has always operated at a disadvantage in the municipal market-those who buy only one or two \$1,000 bonds. Such purchases are considered an "odd lot" (page 80) in the municipal business, so buyers have to pay above the market, and get less when selling.

· Legalities-First to crash through legal barriers holding up the parade has been Big Board member Ira Haupt & Co. (BW-May25'57,p166), which worked out a trust "gimmick" meeting legal requirements. Last week the Treasury Dept. ruled that it could sell certificates of participation in a fixed portfolio of tax exempt bonds, and that income of the trust wouldn't be taxable either to its trustees or to holders of trust certificates sold publicly. Haupt's first offering, expected in a few weeks, will probably consist of 5,000 units of Municipal Investment Trust Fund, Series A, at \$1,000 a unit. It will be a closed-end trust, permitting no additions to portfolio, only sales of bonds that become undesirable.

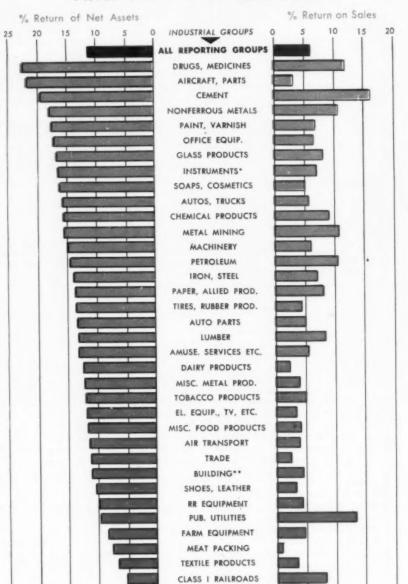
Legislation now in the Washington hopper would permit mutual funds holding mainly municipals (at least 90% of total holdings) to distribute the tax exempt earnings to stockholders as tax exempt income to them.

· Provisions-Several such funds are set to go if Congress gives the green light. At least one-Tax Exempt Bond Fund, Inc., sponsored by Nashville's Equitable Securities Corp.-has queried

underwriters about participating.

These funds and the Haupt trust reportedly expect to offer shares with only a 4% sales "load," against the 7%-up commission most buyers of open-end securities now have to pay. The funds' "management fee" is expected to be about 4 of 1% of a fund's net value annually; for the Haupt trust about 1 of 1%. What yields to shareholders will be remains to be seen.

After-Tax Profits Last Year



*Includes photographic goods

Data: The Conference Board, First Nat'l City Bank of New York.

@ BUSINESS WEEK

nat 1956 Did to Earnings

When the smart business analyst wants to measure just how profitable a company is he uses several gauges. Unlike the tyro, he is not satisfied to judge solely by the size of annual earnings, important though they are in establishing the whole picture. There are two measures that the expert finds especially valuable in sizing up any company's performance:

• The relationship of a company's

after-tax earnings to its net assets.

· The share of each sales dollar

the company has managed to retain as net profit.

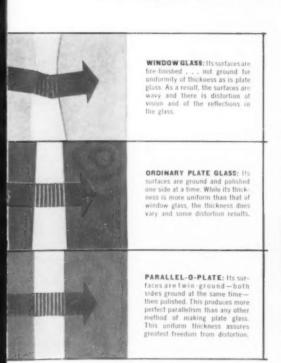
The chart above will give you an idea of how business fared last year as measured by these two gauges. It's based on figures for 2,718 non-financial corporations, compiled by New York's First National City Bank.

· Mounting Sales-Last year, sales of the 2,718 companies ran 11.7% higher than in 1955. But many of them have been caught in the profits squeeze; only 6.3% of 1956 sales were brought

[&]quot;Includes heating, plumbing & equipment



The modern building shown reflected in the glass is a beautiful combination of plate glass and precast concrete panels.



Will the walls of your new building wiggle?

A wall full of windows with the windows full of wiggles can make a building look as bad as an old wrinkled suit.

You can see what we mean above. The glass in these two demonstration windows is backed with black composition board to simulate the mirror effect of windows in a building. In the window at the left, glazed with Parallel-O-Plate*, the reflections are mirror-perfect. In the other, glazed with sheet (or window) glass, note the distorted reflection.



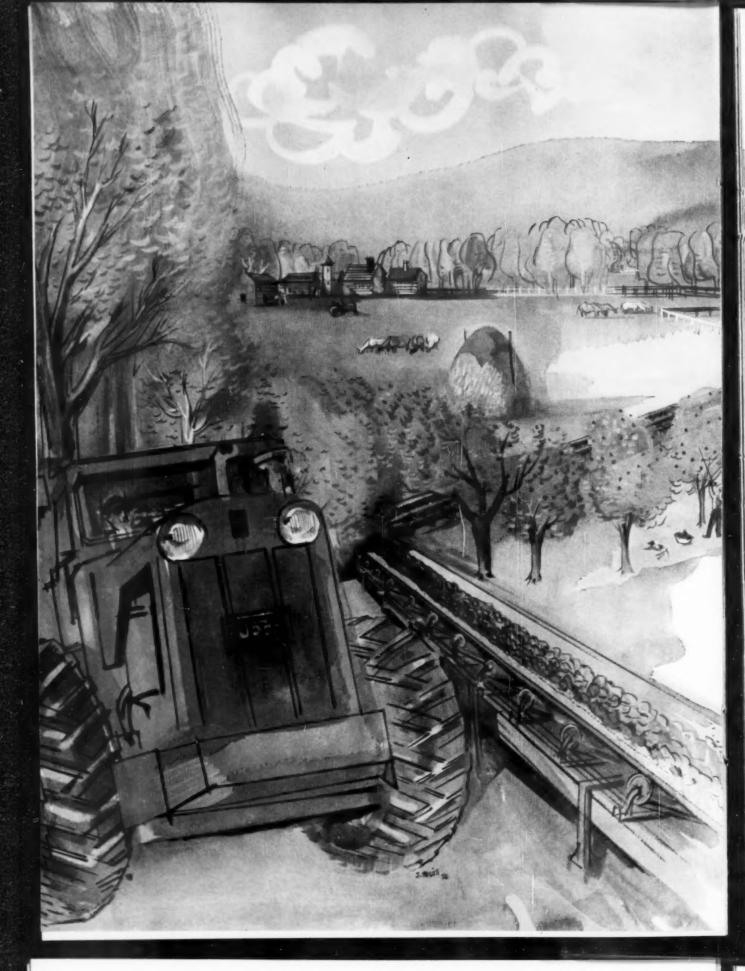
Parallel-O-Plate is the most distortion-free glass made in America, because it is twin-ground. True, it costs more than ordinary sheet (or heavy window) glass, but it makes a very big difference in the appearance of your building—and your pride in it.

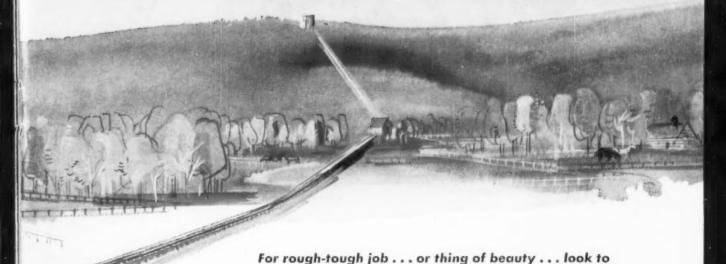
It makes good business sense to agree with your architect when he recommends Libbey*Owens*Ford Parallel-O-Plate Glass.

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 to resist wear in cargo slings, fire hose, starter cords, fishnets and tarpaulins,

For decorative and apparel fabrics, too, this versatile new fiber offers such advantages as easy dyeing with almost every class of dyestuff...snowy, lasting whiteness...warm, soft hand...higher moisture absorbency for comfort...truer colors...high resilience...and excellent drapability.

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This MICRO SWITCH Precision Switch held water level differential to ¼ inch!

Because of the willingness of MICRO SWITCH Field Engineers to cooperate with manufacturers who require more accurate and more dependable control, they are frequently called for consultation.

A well-known manufacturer* of submersible sump pumps, in which water pressure differential is controlled by an underwater diaphragm, sought such help.

It was reasoned that if a small, precise dependable switch could be employed, mechanical linkages required in conventional sump pumps could be eliminated.

A MICRO SWITCH Field Engineer, in collaboration with the pump manufacturer's engineers, MICRO SWITCH Design Engineers and Test Laboratory Staff, worked out a special switch.

The switch was required to start the pump when the water level reached a certain point; then stop the pump when the water level reached a specific lower point. Three important objectives were involved: absolute dependability, sufficient force characteristics to maintain required differentials and extremely long life.

For a final test, a pump was installed in the MICRO SWITCH Test Laboratory. This pump was operated through more than 3 million cycles—over 6 million operations of the switch. It was found that, in addition to reliable stop-and-start operation, the water level differential never varied over \(\frac{1}{2} \) inch!

As a result, a MICRO SWITCH Precision Switch is now a standard component of this pump. Here, again, MICRO SWITCH Field Engineering Service paid off for a user of this service. Have your design group investigate its helpfulness in many different products. There are ten different catalogs which they can request.

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through to profits, compared with 6.8% the year before. And profits themselves

went up only 3.5%.

As had been expected, net assets rose, pushed by the heavy spending on new facilities that was paid for by new capital and by retaining a large portion of 1955 carnings. Because of this, the small 1956 rise in net income was accompanied by a drop—to 12%, from 12.6% the year before—in the return on net assets.

• Bank Unworried—First National sees nothing to worry about in these declines of profit margin and return on investment. Its report says that the average 1956 profit margin "was about in line with the average since the early 1930s. It compares with around 7½% in the best years of the late 1930s and of the post World War II and Korean War boom, and with a low under ½% during the war period of price controls and excess profits taxes."

As for the return on net assets, First National says it has shown "much the same cyclical pattern" but has "tended to work higher over the longer term," since it is "substantially higher than in the late 1930s and even the late 1920s." However, that is "due partly to the lag in upvaluing . . assets in line with higher replacement costs." And "taking the postwar period alone the trend has been reversed."

FINANCE BRIEFS

The second biggest offering of new common stock in decades began this week as International Business Machines stockholders debated whether to sell their rights, worth \$8-\$10 each, or exercise them. They have only until June 10 to decide. The \$231-million offering is second only to General Motors' \$328-million in 1955.

The short interest on the New York Stock Exchange declined to less than 3-million shares, lowest since mid-February. "Short sales" involve only one out of every thousand shares listed.

Fewer but bigger fires are causing insurance underwriters to take losses for the second straight year. From a 5% profit in 1952, profits have fallen steadily. Last year underwriters were singed with a 3.4% loss.

Auto insurance rates are climbing, too. Rate increases averaging 9% have been put into effect in 26 states so far this year. They will cost drivers an extra 530-million.

Savings bank deposits are still on the upgrade, but at a slower pace than a year ago. They now total \$30.5-billion.



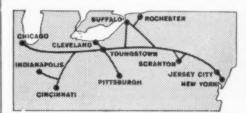
You're looking at a freight train!

Each of these punched cards provides upto-the-minute information about a freight car on the Erie. It tells where the car came from, where it is now, its contents, weight, destination, and other important data. Put them all together and you have a freight train.

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cars on the Erie. From these lists the Erie man in any of our 47 nation-wide sales offices can quickly tell a shipper or consignee what he wants to know about his car – just one of 25,000 on the Erie.

This is the heart of Erie's "Quick Action" car locater service—another dependable Erie service that shippers know they can rely on for prompt, efficient handling of freight. It's typical of Erie's progressive railroading—the reason more and more shippers say, "Route it Erie!"





DEPENDABLE SERVICE FOR THE HEART OF INDUSTRIAL AMERICA



Retailers Put All Kinds of Eggs



GOLDEN EAGLE tried mixing gas station with discount house. The hybrid made money, but owner sold out. New owner will discontinue discount business.

Korvette, with supermarket in one wing, department store in the other, believes it has gone furthest in the diversified product mix.

WANT to buy a house? Sattler's department store in Buffalo will sell you one.

Need groceries? E. J. Korvette, Inc., one-time discount house, now self-styled department store, has them in its Long Island centers (picture, above).

Looking for a toaster at a discount? Try Safeway Stores' supermarket in Bakersfield, Calif.

Like something out of Aldens' mail order catalog? You can order it in a National Tea Co. supermarket in Elkhart, Ind.

Or you may be able to get a washing machine at a discount at the Golden Eagle service stations in Los Angeles (picture left) if you hurry.



in the Scrambled Selling Basket

These are the days of scrambled or mixed retailing. Gasoline stations, supermarkets, discount houses, drug stores, variety stores, full-fledged department stores are all poaching on each other's traditional merchandising preserves. It has got so it is hard to tell one type from another.

All this is the stepped-up version of a long-standing trend. Supermarkets have been chasing nonfoods for some years. Drug stores early retaliated by adding everything from luggage to dishes and socks. Variety stores such as W. T. Grant Co. have been busily transforming themselves into junior de-

partment stores.

Now, J. J. Newberry Co. has followed Grant and pushed deeper into department store and home furnishings lines Discount houses such as Masters, Inc., and Two Guys from Harrison in New Jersey carry apparel and furniture. Mangel Stores Corp. low-to-medium priced apparel chain, plans five new stores, combining softgoods, housewares, and other lines. Everyone nowadays, it seems, is trying to make him-

self a one-stop shopping center.

• Experiments—It's true that many such ventures are still in the test stage. Grand Union Co. hasn't much to say yet about its experimental store in Keansburg, N. J., where it sells furniture, auto supplies, cameras-15,000 nonfood items in all (BW-Jan.12'57, p116). Safeway's weeks-old venture into discount selling of small appliances is still limited to one store. National Tea and Aldens have only the one joint operation so far. Food Fair's Sav'Fair stores in Florida, next to but not in the supermarket, have been going only a few months, and there are only three of them.

Experimental or not, the trend to try new retailing fields is growing. In some cases the repercussions in traditional outlets have already been violent. Retailing students—as well as retailers are asking some important questions:

· Why the rash of scrambled re-

· Is there any evidence yet what

kinds of wares mix and what don't? · Is this the retailing pattern of the future?

I. Scramble of Profits

Pressures to dip into alien fields come from every direction: from the manufacturer, the retailer, and the consumer

From the manufacturer's viewpoint, any retail outlet that can sell his goods may look good in a day of a relentless production flow, which is the case now

in many lines.

From the retailer's viewpoint, low profit margins are the key. Today for many stores profits are tighter than ever. Retail productivity, said Harvard's Malcolm P. McNair in a speech last month at the University of Pittsburgh, hasn't increased enough to compensate for higher costs-which blanket everything from wages to real estate.

· Low Margins-Significantly, it's the low-margin operator-the supermarket and the discount house-that is branch-



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". . . the shopping center gives the individual merchant extra impetus to go one-stop himself . . ."

MIXED RETAILING starts on p. 90

ing out the most. The average 36% profit margin of the department store looks tempting to retailers who operate on half that or less. As they succumb to the temptation, McNair points out, these merchandising innovators spur the conventional retailer to ape the newcomers' pricing and merchandising techniques. This competitive cycle makes it harder for everyone to make a profit.

It has got to the point, said Victor Lebow, marketing consultant, in an address to the Babson Institute of Business Administration, that "the average retailer exists in an atmosphere of disaster" (BW-Dec.15'56,p67).

Perhaps the strongest push to scrambled retailing comes from the consumer. The suburban housewife, shopping by car, wants to get her buying done fast, in one place. And she wants to get a lot done at one time. So she hies to the store that carries the goods—or to the shopping center, which is, after all, the orderly culmination of scrambled retailing. The threat of the shopping center gives the individual merchant extra impetus to go one-stop himself.

II. Plus and Minus

Retailers are still divided as to the merits of scrambling. Most feel that no one yet knows the answers. But some of the experiences of recent months at least suggest the kind of problem the scrambler may run into

Specific problems vary from store to store, but they boil down to two principal ones:

 Different kinds of goods require different kinds of treatment—both in beving and selling.

Display space is at a premium.
 The problem is how to make the most of it. This problem is particularly acute in self-service stores, where everything must be on show.

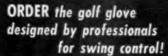
 Selling Out—Rexall Drug Co., back in 1950, converted two stores operated by its Owl Div. into combination drug and grocery stores. In 1955, Rexall sold these stores to independent operators.

It wasn't that the two stores were unprofitable, Rexall says. One of them, in fact, was going great guns at the time of sale. But there were personnel problems. Drug store clerks get less pay than grocery store clerks. If Owl



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31312 Stephenson Hwy. • Royal Oak, Mich. "The world's largest producer of crane scales" had equalized the wages their profits would have shrunk.

There was a basic management decision to make, too. Rexall felt it either had to expand the combination setup or quit. It got out primarily because, as a Rexall official puts it, "We would have had to learn an entirely new This would have diluted business.' its sales effort in the lines it knew best. Yet at least one of the stores is still doing a brisk business under its new ownership-primarily because the shoppers like the convenience, Thriftimart, the new owner, feels.

· Profitable, But-The Golden Eagle service station venture is winding up somewhat the same way. Sunset International Petroleum Corp. set up appliance discount shops at 12 of its Golden Eagle stations and 36 Craig stations on the West Coast late last

Sunset says that the appliances made money almost from the start, and gasoline sales stepped up noticeably from the new traffic. But Sunset sold its stations to Wilshire Oil Co. last month -and Wilshire won't stay in the appliance business any longer than it has to to get rid of its stock

Wilshire reasons the way Rexall did. Appliances might be profitable, but they "are completely foreign to the oil and gas business," an official says. People buy oil and gasoline quite differently from the way they shop for appliances. Gasoline stations are set up for fast-moving customers; appliance buvers browse-and want to park. There just wasn't space at the stations for the pile-up of cars.

The big department store already performs the basic-and, as Perry Meyers, consultant, points out, the costly-service of bringing a wide range of goods, fast and slow-moving, under one roof. But occasionally it explores new fields. Selling houses has lured such department stores as Macy's and some of the Gimbel stores. Macy's has given up this line, for the time being at any rate. It won't explain why, but one can guess that with display space at a premium, houses sold from the store floor proved uneconomical.

· Piecemeal Houses-Sattler's, probably the biggest department store in Buffalo, thinks it has found a way around this problem. It started to sell build-them-vourself houses last Julyprimarily to build up its profits. But Sattler's doesn't exhibit the houses in the store. It sets up a model on a piece of property it purchased for the display. Salesmen work entirely on a commission basis.

A customer must own a lot to buy from Sattler's. He buys the plans, blueprints, and materials, which Sattler's ships him as he needs them. The store figures that the customer spends maybe

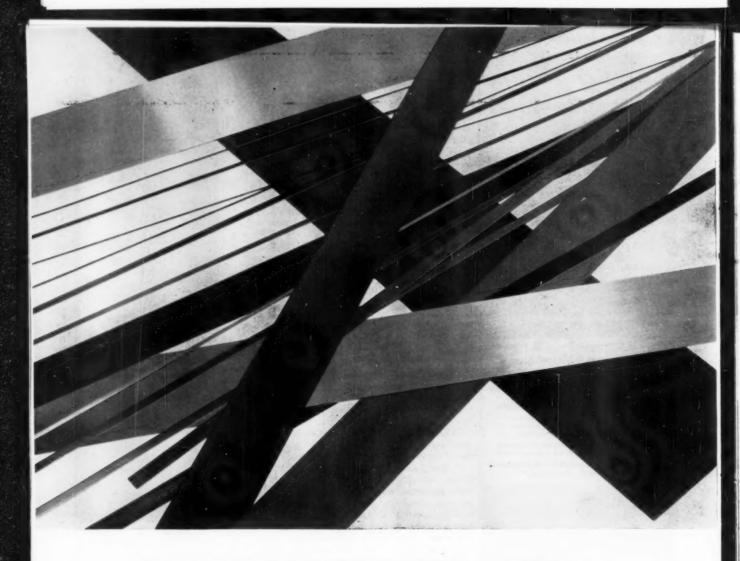


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How these "educated" steels make products behave better

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those tremendous trifles! In turn, this learning and experience is put right into the Athenia steels that successfully meet many of the toughest assignments known today.

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NATIONAL



STANDARD

\$6,500 to \$7,000 for a house that is valued at \$12,000 when finished. Store inspectors help guide the do-it-yourself builder.

Sattler's figures this is a fine profitable business. It sold 112 houses in the first season, has set a quota of 200 this year.

• Across the Board—E. J. Korvette believes that it is the most completely diversified retailer in the U.S. This one-time hole-in-the-wall discounter is currently selling at the rate of \$100-million a year. It operates department stores, specialty stores—apparel, toy, furniture, appliances—and its own shopping center. It is the only low-margin merchandiser, it believes, that runs its own supermarkets.

The reason, as Korvette sees it, is simple. "The best product mix is the complete product mix," an official says. In suburban centers, foods are a must if you want to offer the greatest convenience of a one-stop center.

Korvette concedes that downtown this is not the case. City housewives don't shop in cars, can't carry away great bundles of food at a time. So Korvette's downtown stores sell coffee, and that's just about all in the food line.

At present Korvette segregates its supermarkets. This is a concession to the fact that food buying and fashion buying are birds of different feathers. Women get dressed up for the serious business of buying a new hat or dress—and they brood over such purchases. Neither does Korvette own its carpet center and furniture center; these are run on a franchised basis by independent owners.

Korvette insists that in all lines the same basic low-markup formula applies. It reports that even in traditionally low-markup foods, Korvette can undersell and still come out with a better profit ratio than its competitors. It doesn't have the executive burden of the food chains; its advertising budget is smaller; it makes the best possible use of sales help and floor space; it has no warehouse expenses—and it doesn't have a stamp plan.

• Catalog Selling—The Aldens-National Tea tieup is still too young to base any conclusions on, the managements feel. But so far Aldens reports its Elkhart installation is doing as well or better than a separate catalog store. It gets the heavy traffic of a supermarket, parking, and a building already at hand. And National Tea might also profit from the traffic that the catalog and over-the-counter sales bring in. It is a way to broaden National Tea's line without getting involved in the headaches.

This is the key to Food Fair's Sav' Fair experiments. They give Food Fair an outlet for softgoods, small appliances and the like, under a management that doesn't have to divide its time with food selling. The two types of buying and selling are quite different, Food Fair feels. And the Sav' Fair outlet is a special advantage in locations that won't support a full-fledged shopping center.

III. More to Come?

Retailers are still divided as to what the future will bring-more scrambled merchandise or less. Food Fair is only halfway enthusiastic about nonfoods. Polk Bros., big appliance discount house in Chicago, told a meeting of the National Retail Dry Goods Assn. this week that it has no intention of branching into softgoods. Korvette stands at the other extreme; it apparently sees no limit to the kinds of merchandise you can scramble. It has supermarkets on its drawing boards, an official says, that will outdo any supermarket now functioning in breadth of lines. In fact, it plans to sell major appliances in such supermarkets. They are as heavily presold as traffic appliances, Korvette argues, and the consumer who shops week after week for food will one day succumb to that shiny new range.

• Divided Views—The suppliers themselves are somewhat divided on the issue. Most major oil companies feel gasoline station operators should stick pretty closely to their own knitting. Appliance manufacturers and distributors "welcome any merchant who can sell" the smaller items. But the major appliances are something else again. One big distributor comments bitterly that the big stores that use appliances as loss leaders to lure customers are wrecking the franchised appliance dealer, who can't make up his losses in other lines.

On the so-called convenience items, it's a sure bet that they will turn up most anywhere: stockings, household items. In big-ticket items, it's still anybody's guess. Some experts feel with Perry Meyers that the long-term swing will be to more specialization in softgoods and home furnishings. These require big inventories, skilled selling.

Lansing P. Shield, president of Grand Union, probably sums up the thinking today: The consumer will decide what he wants to buy where. And the stores will give him what he asks for.

Road Service for Just One Dime

That's what Thruway driver pays for a voucher that covers him for assorted troubles up to \$25.

A novel protection plan for motorists on the New York Thruway went into effect this week. The plan aims to end gripes at what motorists have felt are high charges for minor emergency services.

The plan works like this. A motorist buys an Emergency Highway Protection voucher at a gasoline station, restaurant, or motel near entrances to the Thruway. He pays 10¢ for one voucher, which is good for a 24-hour period starting at 12:01 a.m. The voucher entitles him to charges of up to \$25 during that period, for certain specified services required on the Thruway. These include charges resulting from running out of water, gasoline, or oil, tire or ignition trouble, towing, fan belt trouble, brake trouble, and the like. They do not include normal maintenance charges, the installation of tire chains, or the cost of parts.

• Distress Signal—If the motorist's car breaks down on the Thruway, he follows the routine recommended by the Authority. He pulls off the road, ties a handkerchief to his left door handle or aerial, and waits for the police patrol to send an authorized serviceman. The serviceman may come from any one of the 17 official servicing garages—the New York Thruway Garage Con-

tractors—all of whom have signed up with Accimatic, Inc., of Troy, which operates the plan. Then, instead of paying for the service, the motorist gives his voucher to the servicer, who turns it in to Accimatic and collects his charge from that company.

The service has no official tie with the Thruway Authority, but unofficially the Authority is all for the plan. Motorists stuck on the highway's long stretches have complained about charges of \$10 to \$20 to fill up their tanks with gas. It is the distances involved, of course, that make servicing so costly.

• Out of Gas—Some idea of the need for this kind of service shows up in data published by the Thruway for the first calendar year of its operation, 1955. During that year, the Thruway officials said, the 17 garages handled 46,309 emergency service calls. Of these, 32% were for cars that had run out of gasoline.

Accimatic says this is not an insurance plan and does not come under state insurance laws. It expects that motels and restaurants may give the vouchers free to their patrons—much the way a store gives a trading stamp. The company hopes that other expressways will take up the idea. **END**

In Marketing

FCC Rules That It Has Right To Authorize Pay-TV Experiments

The Federal Communications Commission last week removed one roadblock in the way of authorizing tests of pay-TV. The commission ruled that it had the authority to permit such tests if it found the public interest would be served by doing so. Opponents of pay-TV have argued that the FCC lacks authority under existing law to allow private companies to use TV frequencies for shows the public would have to pay to see.

In last week's ruling FCC indicated it needed further information before actually deciding whether to permit tests, and asked interested parties to submit answers to

a number of questions.

The FCC has been reported to be close to authorizing some sort of pay-TV experiments (BW-Apr.13'57,p76).

Reportedly toll-TV opponents, including influential Congressional critics, have registered some strong arguments in the meantime. Emanuel Celler (D-N. Y.) chairman of the House Judiciary Committee, and Oren Harris (D-Ark.) chairman of the House Commerce Committee, wrote the commission requesting a delay. Harris raised the question of the FCC's authority to permit tests without Congressional action. But last week's ruling shows the commission thinks it already has the authority.

The three principal companies involved in pay TV are Zenith Radio Corp., Skiatron Electronics & TV Co., and International Telemeter Corp., a subsidiary of Paramount Pictures. But observers believe that if FCC gives the go-ahead signal, other companies will jump into the

field.

Oil Industry, Already Under Congress Fire Gets a Drubbing From Another Direction

Oil industry pricing methods, under heavy attack in Congress (BW-Feb.16'57,p38), are currently bearing

the brunt of government antitrust probes.

A federal grand jury in South Bend, Ind., last week began hearing evidence on alleged collusive price fixing by five major oil companies. The Justice Dept., acting swiftly on the basis of testimony by gasoline station dealers before the Roosevelt Small Business Subcommittee last May, is conducting an investigation of Standard Oil Co., (Indiana), Ohio Oil Co., Socony Mobil Oil Co., Sun Oil Co., and Phillips' Petroleum Co. Dealers told the Roosevelt group that they received nearly identical phone calls from their suppliers, ending a price war and setting a new retail price.

On the basis of the same dealer testimony, the Federal Trade Commission plans to launch a field investigation of Indiana Standard's pricing policy in the Midwest. According to Congressional testimony referred to FTC,

the oil company follows a "suggested price" policy in marketing its gasoline in the area. FTC wants to check whether this alleged practice actually amounts to an illegal method of price discrimination.

The federal grand jury investigation of industrywide marketing and pricing policies, which began in Alexandria, Va. (BW-Mar.9'57,p161), is getting into full swing. Up to now, Justice Dept. attorneys have been beating down oil company objections to the scope of subpoenas to produce company documents. Over 30 companies are involved, with the bulk of testimony still to come.

Carpet Industry Hears It's Picking Up, But Still Has Threadbare Spots

The carpet industry got some encouraging news at the Carpet Institute's annual spring meeting in New York. The institute's board chairman, Alfred J. deGozzaldi, told the meeting that net profits of publicly owned carpet companies jumped from an average of 1.3% of sales in 1955 to 4.2% last year. At the same time, total carpet production last year rose 9.7% over the year before.

Industry efforts to stimulate wider use of carpets, such as increasing adoption by retailers of time-payment plans, and other sales techniques, are paying off. For one thing, deGozzaldi reported, per family buying of carpeting jumped from 1.8 sq. yd. in 1954 to 2.3 sq. yd. last year.

On the darker side, carpet makers heard that imports of foreign-made carpets are continuing to grow. The industry plans to ask the Tariff Commission for relief, deGozzaldi said. Other problems mentioned: Earnings, though improving, aren't satisfactory for industry growth; the carpet industry isn't up to other fields in fresh styling ideas; advertising expenditures are small compared to some competitive industries.

Marketing Briefs

Masters Mail Order Co., Washington (D.C.) mail order house, has set up newspaper ads to run in New York this week offering General Electric fair-traded goods at less than fair-trade prices. A subsidiary of Masters Inc., New York discounter, Masters Mail Order won a victory in a suit brought by GE. GE had sought an injunction to stop Masters from underselling fair trade prices by mail (BW—May25'57,p77).

Supermarkets took a record 58.9% share of total grocery volume last year, Super Market Merchandising, trade magazine, reports. Supermarkets accounted for \$23-billion in sales in 1956 against \$16-billion for other grocery stores. A wave of new market openings was the big reason for last year's 13.8% increase in sales over 1955.

Columbia Records, Columbia Broadcasting System subsidiary, has bought Bell & Howell's line of high fidelity radio-phonograph consoles. The sale includes six phonograph and phonograph-radio-tape recorder combinations, priced from \$595 to \$1,800 at retail.

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shock- and stretch-resistance on the drive.

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Monetary Probe in Britain

Private commission starts full-scale study, amply bolstered against any outside pressures.

It's the sort of inquiry that Eisenhower asked for in the U.S., only to see it lost in the political smoke.

The government hopes to find something to supplement the money restrictions which have not succeeded in keeping prices under control.

Without any fuss or fanfare, a powerful nine-man committee began work this week on a full-scale investigation of Britain's monetary system.

This committee is making the kind of study for Britain that Pres. Eisenhower had wanted a private commission to do on the U.S. monetary network. In fact, the British study was sparked in part by reports of various American proposals for a monetary investigation made last year. The first to propose a study for Britain was Sir Robert Boothby, an unorthodox Conservative member of Parliament, who acted after hearing about U.S. plans.

But while Congress turned down the President's request for a study by private experts and finally set up its own investigation with heavy political overtones, Chancellor of the Exchequer Peter Thornevcroft early this month quietly appointed a commission of private citizens to carry out a nonpolitical inquiry in Britain.

• Pressure-Proof-The commission has been given broad powers to carry out the investigation any way it chooses. And the makeup of the commission has been deliberately chosen to withstand pressure from banks, business, parliament and even the government itself.

Heading the group is Lord Radcliffe, a former judge who gained experience and prestige as chairman of the royal commission on taxation. He is not a monetary expert, but British authorities consider that he exemplifies the kind of judicial and objective approach needed.

The other members of the commission were just as carefully chosen. Two are economists. London University's R. S. Savers, an academic expert on money and credit who has served as economic adviser to the Cabinet, and A. K. Cairneross of Glasgow University, who last year was director of the Economic Development Institute of the World Bank in Washington.

Four of the commission are businessmen, including two representing the

banking field. One is Lord Harcourt, who formerly worked as the United Kingdom's Economic Minister in Washington and who heads Morgan Grenfell & Co., Ltd. The other is Sir Oliver Franks, former Ambassador to the U.S. and now chairman of Llovds Bank, Ltd. Also on the commission are two trade union leaders.

· Hearings to Come-The Radcliffe Commission, as it is now called, has begun by taking written testimony from a great many sources, including the Bank of England, the commercial banks, the Treasury, and other financial groups. Later, it is expected to hold hearings. All its proceedings are taking place in private, and it will not produce a public record until it finally makes a report. The entire proceedings are expected to take from 12 to 18 months.

· Similarities-In setting up the commission, the British government acted from the same basic motives that prompted Eisenhower's request. Both governments share the economic objectives of full employment and a stable price level. In the past two and a half years, they have relied on restrictive monetary policies in order to keep prices under control. In each case, monetary policy failed to work according to plan, and its effectiveness has been subject to a lot of controversy.

The Bank of England, Britain's central bank, has an even greater range of monetary controls than the Federal Reserve. It limited the amount of credit available and raised the bank rate to 5½% from 3% from 1955 to 1956, compared with a rise to 3% from 11% in the same period here. It also used direct controls over consumer credit, which the Fed did not possess. And it made more active use of "moral sua-sion"—the "gentlemen's agreement," which is a traditional weapon of the Bank of England.

· Less Effective-Despite all these measures, monetary policy has been even less effective in Britain than in the U.S. It did succeed in slowing down the boom. The rates of growth in gross national product and industrial production were not explosive. But prices continued to rise during most of the period when restrictions were in force. Moreover, the broad and indirect monetary controls used by Britain's monetary managers tended to discriminate against private borrowers, including corporations.

This contrasts markedly with U.S. experience in using general and in-direct controls over credit. Here, the Fed's policy has not restrained corporate borrowing. Instead, it has limited the amount of credit available to the mortgage market, small business, and state

and local governments.

There is a simple explanation for this contrast. Britain's nationalized industries were able to get funds readily via capital advances out of the national budget. This cut down on the amount of credit available to other borrowers, including corporations. In the U.S., on the other hand, most governmentsupported borrowing for mortgages and public works was limited because corporations, which could pay higher rates, got most of the funds.

· Balance of Payments-The British experience with monetary controls was complicated by its balance of payments position. Unlike the U.S., Great Britain is now a debtor nation whose economic position is heavily influenced by changes in demand for exports.

There are also a number of important technical differences in the operations of the British and U.S. money markets. For example, the British have a small, tight-knit banking system-the top 11 London banks control over 85% of total U.K. deposits. There are thousands of individual units in the U.S. commercial banking system, and the Federal Reserve itself is split into 12 regional districts.

This makes it possible for the Bank of England to make frequent use of moral suasion. It can easily call together the leaders of the banking community and request cooperation-and it frequently does. Tradition alone serves to keep the banks in line. As one Federal Reserve official notes: "A request by the Bank of England has the force of a law. No banker dare ignore it.' · The Non-Banks-But as in the U.S., the power of the money managers has been weakened by the growth of nonbank financial institutions-government lending agencies, insurance companies,

finance companies. These groups are,



for the most part, immune to credit control and have often counteracted restrictive credit moves.

An important phase of the Radcliffe Commission's investigation will concentrate on the role of these non-bank institutions. Attention is likely to focus on spending for the nationalized industries. As it stands now, this comes out of the budget surplus. Some critics feel that this policy actually makes the budget inflationary although on the surface, it appears to be deflationary.

The question of the budget will inevitably lead to a full-dress examination of the relationship between the Chancellor of the Exchequer and the Bank of England. Unlike the U.S., there is no feeling in Britain that the independence of the Bank of England is at stake. Under the British system, the Treasury and the Bank are both involved in monetary management under a system of "dual control."

This has presented some difficulties, but the British definitely feel that there must be a close working relationship between the Treasury and the Bank. True, the government has been criticized for not making its fiscal policy supplement monetary policy. But there is no feeling that the monetary managers are subservient to the Treasury.

· Up to the Government-As the British see it, final responsibility for monetary policy must rest with the government in power rather than with the central bank. This custom was followed even before it was put into law when the Bank of England was nationalized in 1946. Now, announcements on monetary policy are frequently made by the chancellor, and are subject to criticism in the House of Commons. For example, it was the chancellor, not the governor of the Bank of England, who appealed to the banks for a "positive and significant" reduction in advances as a means of restricting credit expansion.

The Bank's job is to advise the Treasury on policy and serve as the instrument for carrying it out. It intervenes in the government bond market, but it does not "peg" prices as the Federal Reserve did before the Fed-Treasury accord of 1951. It mainly acts to stabilize the market and smooth the path for government financings.

Indirect Controls—This is particularly true since the Conservatives gained office in 1951. Before that, Labor relied mainly on physical controls and import restrictions to keep the economy stable. The Conservatives lifted physical restrictions and relied increasingly on the Bank's indirect controls over credit.

The Conservative government was so confident that orthodox monetary measures would work that it put through tax cuts in 1955. It felt that





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What Research Means to American Business

American industry plans to invest \$150 billion in new plant and equipment during the next four years—more than in the five years 1952-1956. It plans to carry out this record investment even though manufacturing capacity has nearly doubled since World War II. These facts are reported in McGraw-Hill's tenth annual survey of Business' Plans for New Plants and Equipment. They contradict many long-established theories about investment in capital goods.

According to the textbooks, a high and rising level of capital investment is generally followed by a decline. The bigger the rise—so the old theory goes—the bigger the decline will be. But, after a decade of high-level investment and an especially strong rise in the past two years, industry now has plans to keep right on with near-record outlays for plant and equipment. Does this mean some new factor has been added, to change the investment cycle?

The New Factor - Research

The latest McGraw-Hill survey points out one new factor which, more than any other, is changing the nature of the investment process. This is the record outlay planned by U.S. corporations for scientific research and development—to create new products and develop new industrial processes. The rapid growth of research in industry, and plans for even more remarkable growth in the years ahead, are shown by the accompanying table.

This year industry plans to spend \$7 billion on research and development — up 20% from 1956. By 1960 it will spend \$9 billion — enough to create a major new industry.

By 1960 manufacturing industry expects sales to be up 26% — with half the increase in products that were not made in 1956.

Growth of Research and Development Expenditures (Millions of Dollars)

			PLANNED	
	1955	1956	1957	1960
Machinery	408	506	577	704
Electrical Equipment	950	1,149	1,310	1,637
Aircraft and Parts	,038	1,558	2,274	3,161
Fabricated Metal Products and Ordnance	134	165	174	210
Professional and Scientific Instruments	185	252	300	453
Chemicals	440	498	528	617
Paper, Rubber, Stone, Clay and Glass Products	149	174	196	233
Petroleum Products	171	205	225	277
Other Manufacturing	1,038	1,279	1,388	1,557
Non-manufacturing industries	254	310	347	419
ALL INDUSTRIES	1,767	6,096	7,319	9,269

What Research Is Doing

Here are some examples of how industrial research is opening up new markets, or compelling the modernization of old facilities:

New automatic controls in petroleum refining will raise the quality of gasoline and reduce the time required for production. A new process for recovering oil from depleted wells promises to multiply our potential reserves.

A new process for treating iron ore will permit the ore to be fed directly into steel furnaces — without the need for blast furnaces or coke ovens,

New turbine engines — made possible by the development of heat-resistant alloys for turbine parts — offer greatly increased power for aircraft, ships and automobiles.

Altogether, industry plans to introduce more new products in 1957-1960 than in any previous four-year period. It also plans new processes on a scale that will make much of our present capacity obsolete. These new products and new processes are the secret behind continuing plans for high investment.

One-third of all manufacturing firms are building new plants this year to produce new products, and by 1960 this may account for 10% to 20% of all capital expenditures. At the same time, manufacturing companies report that over half their capital expenditures in the next four years will be for modernization of equipment and introduction of new processes. Thus the preponderant share of new investment will be based on developments growing out of research.

A New Kind of Prosperity

The keen interest of U.S. business firms in scientific research points the way to a new kind of prosperity for our economy —a prosperity based on deliberate creativeness. As long as we can create new products that will offer better value to consumers or cut costs to manufacturing firms, business will continue at a high level—not at fever pitch, perhaps, and it is to be hoped not at an inflationary pitch. But based on a steady stream of new products and processes, we can have a high level of general prosperity that defies the old laws of boom and bust.

It's Not Automatic

Of course, there is no guarantee. New products do not spring up by magic as the medieval alchemists hoped they would. They are found as the result of long and expensive effort in laboratories and pilot plants. This effort requires an increasing number of trained scientists and engineers. In 1957 alone, manufacturing companies report they will need 7% more of these highly trained people in research and development. And by 1960, they will need an additional 15% to carry out planned research programs.

The effort to maintain prosperity — as well as the national defense effort — will depend increasingly on this supply of scientific and technical personnel. But if we can supply the people, industry now has the plans for a research effort that will put an end to the spectre of idle plants and idle workers.

This message is one of a series prepared by the McGraw-Hill Department of Economics to help increase public knowledge and understanding of important nation-wide developments. Permission is freely extended to newspapers, groups or individuals to quote or reprint all or parts of the text.

Donald CMC Graw-

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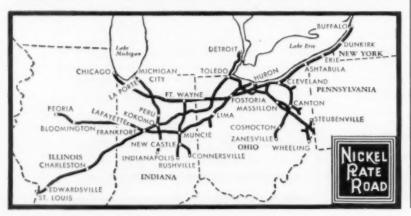


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this relaxation, combined with a restrictive credit policy, would result in increased production. The actual result was a big increase in demand for goods that had to be met by a special antiinflationary budget and direct controls over consumer credit. Even so, prices continued to rise and inflation is still a threat.

 New Methods—Now there is general recognition in Britain that orthodox monetary policy has not worked in practice. The British are not abandoning their use of monetary controls, but they seek to assess the changed situation and come up with new methods to make the present policy more effective.

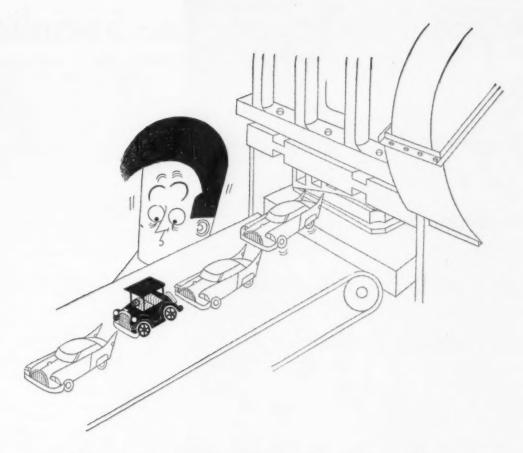
Most British authorities have high hopes for the Radcliffe Commission. This is partly because of the caliber of the men chosen to make the investigation. But it is also because of the high prestige surrounding a former monetary study, the work of the Macmillan Commission, in 1951.

That group was the last to make a thorough investigation of Britain's monetary setup. It ruthlessly squeezed information out of bankers and businessmen, and emerged with radical recommendations that changed a great many financial procedures. For instance, the commission was disturbed that small and medium-sized businesses had difficulty in arranging financing, and it proposed methods to take care of what was termed the "Macmillan Gap." These are still in use today.

One of its members was John Maynard Keynes, whose cross-examination of Montague Norman, then governor of the Bank of England is a classic of conomic history. The tremendous authority still accruing to its work was a big help in establishing the new commission.

• A Look at the Fed-Just what the Radeliffe Commission will come up with is difficult to forecast. Four of the members-Harcourt, Franks, Cairncross, and Sayers-are thoroughly familiar with the U.S. system, and will undoubtedly look closely at the Fed's experience. For example, Lord Harcourt is known to favor adopting legal reserve requirements for commercial banks such as the Fed holds. At present, the Bank of England relies on a tradition that calls for the banks to maintain fixed reserves.

But by and large, the British see little in American experience that can be of help to them. The fact is that American financial circles, including the Federal Reserve System, feel that the British commission is much more likely to come up with recommendations that the U.S. will find of value. As one Fed official put it, "We may be able to do without a real study of our own if the Radcliffe Commission does a good job." END



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FAMILY DOCTOR David Hughes is one of the 45,000 physicians participating in the program.

Socialized

The records show that the British generally are healthier under the program. Only the doctor, who feels he is being short-changed, is unhappy.

NEXT WEEK, British doctors will sit in at what may seem to Americans to be the "crisis" of Britain's socialized medicine program. The medicosmembers of the Institute of General Practitioners—will decide whether to walk out on the National Health Service or go along with the Royal Commission appointed to look into their professional and money problems.

From this, it might seem that Britain's bold experiment has reached the point of collapse. Actually, that is far from being the case. Socialized medicine encountered all the complications and setbacks that American doctors had predicted, but nevertheless it works. Even the most pessimistic diagnosticians admit that the nine-year-old program has every chance of attaining a ripe old age.

• Gripe—The crux of the current dispute is the complicated system under which general practitioners are paid. While consultants and specialists attached full-time to a hospital staff are paid on a salary scale ranging from \$5,040 to \$8,680 a year—with "distinction" awards that can add up to another \$6,160—the family doctor is not salaried, but is paid according to the number of patients on his "list."

At present, the per capita payment



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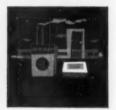














for the process industries

There is general agreement that the digital control system, featuring a digital computer in direct control of continuous processes, will in the future be widely used in the process industries. Opinions vary, however, as to how rapidly this development will take place.

The principal cause of the difference of opinion arises from the concept of an ultimate control system that would exercise precise control of a complicated process whose inner relationships are not at all well understood today. Such a system would require not only great advances in the understanding of the process itself, but would also require instrumentation that would be capable of measuring continuously every aspect of the process.

It is undoubtedly true that such an ultimate system is a long way off. But this should not be allowed to obscure the important fact that digital control systems can be successfully applied to present-day processes even though the process reactions are not completely understood. Existing control relationships can be used as the starting point, and as understanding of the process increases through research and operating experience, the process can be improved by merely reprogramming the computer. The same is true when new and improved instrumentation is installed to measure more of the process variables. This ability to make frequent and substantial changes in process control without the necessity for replacing the computer equipment is an outstanding feature of the digital control system.

Digital control systems can today be utilized to improve product quality, to reduce operating costs, and to increase plant output. In multi-product processes, they can proportion output for maximum profit; in blending operations with variable input materials, they can achieve optimum product characteristics.

While the use of a digital computer brings with it the recognized advantages of high speed and accuracy, probably the major benefit comes from its ability to make quickly many complex decisions involving a number of different variables and requiring a large number of calculations. Such decisions are completely beyond the capability of a human operator (or any number of operators) to make in the time required.

Despite its versatility, a computer for use in control applications need not be nearly as complex or expensive as are the large computers being used today for data processing and computation. Ramo-Wooldridge projects for industrial customers have resulted in the design of control systems where a moderate investment in new equipment for an existing plant will lead to benefits in increased operating efficiency that pay off the investment in from one to three years.

If your company has a problem in process control, we would be glad to discuss it with you and tell you whether a digital control system could provide the answer.

The Ramo-Wooldridge Corporation



Story starts on page 106

is 17 shillings (\$2.38), which gives the general practitioner an average net income of \$6,221 a year. Out of this, the doctor must pay all his expenses and provide professional service for all his patient problems, no matter how distantly related to health. The doctors contend that their own expenses have gone up more than 20% since 1948—when the service went into effect—and the government health officials refuse to make a comparable salary adjustment.

For many, it goes against the grain to have to bargain on wages "like a civil servant." Many fear that participation in the service will lead to a downgrading of the profession.

• Less Opposition—Despite the discontent, it's almost a foregone conclusion that the GP's will drop their plans to "strike." Until the government broadened the terms of the investigation to be made by the Royal Commission—and upped wages 5% to 10% in the interim—the doctors were threatening to walk out of the health program and begin charging again for their services. Even such a walkout undoubtedly

would have ended when a settlement was reached.

Opposition to socialized medicine has pretty well died out in Britain. Roughly 97% of the population are health service patients. There are 45,000 doctors in the program. The British Medical Assn. estimates that only about 700 doctors remain in purely private practice. Almost all the nation's 15,800 druggists take part, as do nearly 7,000 ophthalmic opticians and dispensing opticians, along with most of the 900 ophthalmic medical practitioners. Dentists participate 97%.

• The Bill—This year, more than \$1.8-billion will be spent on the health service in England, Scotland, and Wales—compared with \$1.2-billion during its first full year of operation. A large share of Britain's heavy tax burden goes to finance this "free" medical care. One source estimates that the service costs an average of \$120 a year for every family in Britain.

Basically, the British citizen gets free medical care, free hospital service, and free drugs. But he must pay a fee of one shilling (14¢) for each separate item on a doctor's prescription. The days of free eye glasses and den-



PATIENT gives Dr. Hughes some fresh eggs. In pre-socialized medicine days, eggs probably would have applied on bill.





A QUICK ONE at the local pub, and Dr. Hughes is off again. His practice covers a large rural district in southern Wales.

EMERGENCY call in the night interrupts doctor's sleep, but he is dressed and on the road in less than 10 min.





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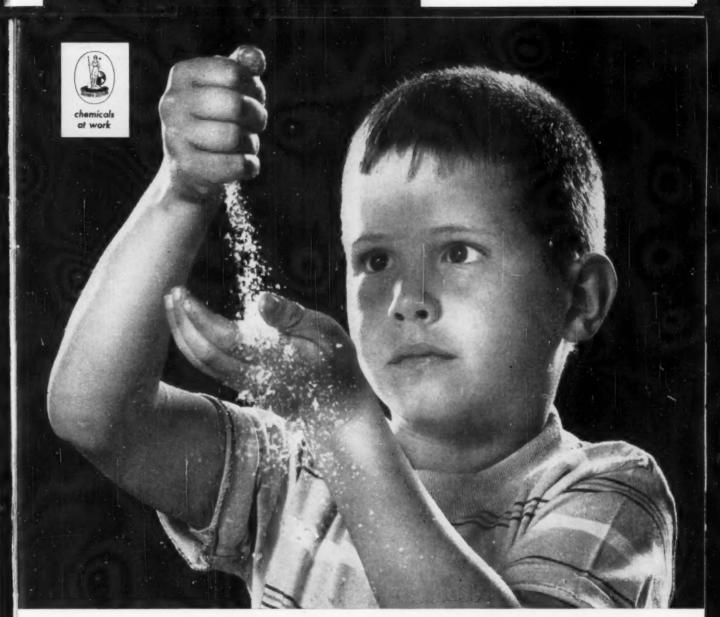
VICAR and Dr. Hughes discuss the progress of a parishioner who is on the sick list.

tures are over. A pair of spectacles costs £1 (\$2.80) for the lenses, and from 65¢ to \$3.30 for the frames. Dental care costs a maximum of \$2.80 for a full course of treatment. Dentures can cost up to \$11.90. Last month, the Minister of Health introduced a bill in Parliament to double compulsory weekly contributions to 22¢ per employee, of which about 4¢ will be contributed by the employer.

• Evolution—It is often thought abroad that the Labor Party fathered Britain's health program during its postwar erection of the welfare state. The fact is, socialized medicine in Britain was the result of evolution over many years. From 1912 onward, workers had been partially covered by a national health insurance plan. In 1943, with the support of all parties, the wartime Coalition government announced its plans for a National Health Service. Labor Minister of Health Aneurin Bevan guided the new service which went into effect in 1948.

 Evaluation—It's a little too soon to measure in terms of statistics the impact of this multimillion-dollar welfare program on the health of the British mation.

For one thing, its introduction coincided too closely with the advent of the wonder drugs, a rise in the standard of living, and better education. However—whatever the cause—there's no question that the nation is in better health. Since 1948, deaths from tuberculosis have fallen from 45 per 1,000 deaths to 13 per 1,000. And the infant mortality rate for England and Wales dropped from 41 per 1,000 to 23.8 per 1,000 over the same period. In the



Moth repellents by the ton are made with Columbia-Southern paradichlorobenzene

Where do they go when they disappear?

This clothes closet mystery of disappearing moth crystals is a fascinating question; so is the answer.

Every spring and summer, thousands of tons of moth crystals are spread in and around stored woolens to repel moths. Where such safeguards are not taken, the unwanted devourers cause an estimated damage of almost \$400 million annually.

Months after application, all visual evidence of these repellent materials is gone. What really happened? Physicists and chemists call the action sublimation. These repellent materials

vaporize at a temperature lower than the temperature at which they melt. The substances slowly change from solid to gas which disperses into the atmosphere, and so pervades the fibers of the clothing. When the moth crystals vanish, their matter has not disappeared at all; it has merely changed form.

Columbia-Southern produces and supplies paradichlorobenzene crystals in volume to specialized industries that package or block this material into convenient form for effective moth repelling in millions of homes.

Columbia-Southern, a leading pro-

ducer of chlorine, alkalies and related chemicals, works intimately with all of the nation's industries, large and small, to make products better, safer, faster, and more economically.

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CHLORINE, ALKALIES AND RELATED CHEMICALS OFFICES IN PRINCIPAL CITIES

IN CANADA: Standard Chemical Limited and its Commercial Chemicals Division



What is TELETYPE°?

A Teletype Printer is a communications device — with a keyboard similar to a typewriter — that enables you to send and receive printed messages. With it, written word can be sent instantaneously by wire . . . within the office or plant . . . or clear across the country; to a single destination . . . or to any number at the same time.

In today's business world, in fact, Teletype equipment is often more than a communications instrument. It is a basic element in production control systems...its ability to transmit and reproduce text and punched tape is harnessed to office automation...it provides a "conveyor system" for channeling complex raw data to a computing center thousands of miles away.

Whether leased through your telephone company or other communication companies—or purchased outright from us—the versatile line of Teletype equipment can be tailored to almost any conceivable demand. For further information, contact your telephone company or other communications company, or send for our free booklet, "The ABC's of Teletype Equipment," Teletype Corporation, Dept. BW6, 4100 Fullerton Ave., Chicago 39, Ill.





WAIST LINES expand just as rapidly as they did in pre-socialized medicine days.

U.S., the death rate from TB was 0.1 per 1,000 in 1955; and the infant mortality rate in 1956 was 26.1 per 1,000 births.

• One Standard—Private practice continues, mostly among the consultants of London's Harley Street. But it is gradually dying out. The theory that only the poor would sign up for NHS proved to be a miscalculation. Britain's oppressive scale of taxation saw to that.

Actually, there seems to be no double standard of medical treatment for NHS or private patients. A private patient pays for the privilege of "jumping the queue" rather than for better medical care. In fact, doctors agree that the standard of treatment often is better at the hospital out-patient clinics for such things as blood tests, X-rays, and electrocardiograms.

 Full Waiting Rooms—One frequent criticism of socialized medicine is that it encourages malingering. British doctors are sharply divided on this point. Some complain of waiting rooms filled with people who have only minor or imaginary complaints.

On the other hand, some doctors rejoice that it is no longer necessary to put up with the whims of the rich to get money to treat the poor.

Statistics indicate that the average number of visits to the doctor per patient has not gone up under national health, but the number of patients has increased tremendously. One doctor sums up the situation this way: "For years, we had been telling these people they should see their doctor at the first sign of trouble. We can hardly complain when they take us up on it." END

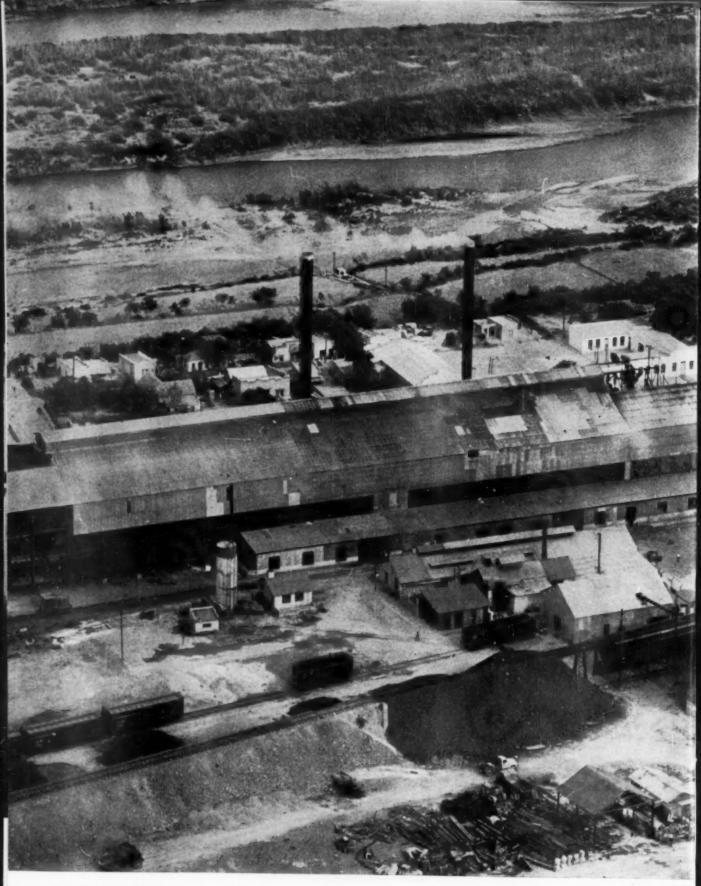


PHOTOGRAPH BY KARSH OF OTTAWA

From his pulpit Fred Dresch preaches tolerance

• Fred not only talks tolerance, but from his pulpit, or control station of a modern Sendzimir Mill, he cold rolls strip steel to extra fine dimensions for those customers who require material of exacting specifications. He is one of a team of experienced rollers who work with the industry's most modern equipment to assure users of the highest quality possible when they specify Sharon Steels.





114 Business Abroad



American Steel Mill Does Fine in Mexico

La Consolidada (main mill at left) has survived 50 years in Mexico and has thrived on it. It's Mexico's No. 3 steelmaker.

Since World War II, blue-chip U.S. companies have flocked to Mexico, setting up subsidiaries to cash in on the country's industrial boom. Compared with these newcomers, La Consolidada, S. A. (pictures)—an American-controlled steel company—is a landmark of Mexico. It has already run the gamut of Mexican political upheavals, economic downturns, devaluations, and all the red tape that occasionally harasses foreign-controlled companies.

As a basic industry, Consolidada would seem to be a prime target for the kind of nationalization that the Mexican government pulled on the oil companies in 1938. Yet this steel company—now celebrating its 50th anniversary—can look back on a relatively troublefree past.

• No. 3 Producer—By U.S. standards, it's a small producer—output of 112,000 tons and sales of \$19.9-million during 1956. But in terms of the Mexican economy, Consolidada is big stuff. It is an integrated steel company—with ingot production at Piedras Negras (picture, left) across the Mexico City and nearby Lecheria.

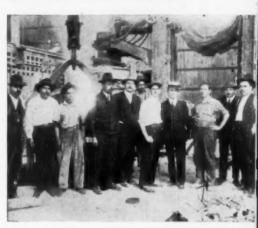
Consolidada ranks as the country's largest producer of finished steel. In tonnage alone, it is the No. 3 producer, with government-controlled Altos Hornos de Mexico, S. A., and Cia. Fundidora de Fierro y Acero de Monterrey, A. A., in first and second place.

• Well Treated—Two American scrap dealers who saw Mexico's economic potential started Consolidada in 1907. In 1942, a group of Wall Street investors headed by Shields & Co. took control. At the time, they had no intimate knowledge of the workings of the Mexican economy. Now, with 15 years' experience behind them, Shields and Consolidada's U.S. executives have nothing but praise for the way Mexico has treated them.

Here are some of the reasons why:

• The government protects Consolidada against competition from imported U.S. and European steel products.

 The government's "Buy Mexican" program is bringing in new customers every day. For instance,



In 1921, electric furnace . . .



. . . and fast delivery—for then.



Today, rush orders by air.

When and as read, this advertisement definitely should be construed as a bona fide offer of sale.



Subscribers to what is termed the Martini find Schenley Golden Age Gin Preferred for this chilled Amalgam of gin and vermouth.

Golden Age Gin by Schenley

90 PROOF - Distilled from 100% Grain Neutral Spirits

Callable

Interest

Stock up, for, in our opinion, your guests will surely call for more.

A considerable amount, directed at its naturally golden color, ultra-smooth taste.

Participating Preferred

Subscribe to a mutual gin-swirling investigation; then let your taste alone decide its merits.

Illustrated Prospectus detailing the prescribed procedure for combining ingredients for the Perfect Martini and other Elegant combinations is available free from the undersigned upon written request, 350 Fifth Avenue. (Address Dept. SE-2).

SCHENLEY DISTILLERS CO., N. Y. C.



Processing 36,000 Chickens A Day—

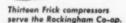
The Rockingham Poultry Marketing Co-op., Inc., has six buildings in its great plant near Broadway, Va.

Frick refrigeration has aided the growth of the plant for 20 years in a wide variety of ways —cooling numerous storages to different tem-

> peratures, quick-freezing poultry and other products, making 50 tons of ice daily, and doing air conditioning.

What is YOUR special cooling problem? Let Frick Engineers aid you in solving it now. Write, wire or phone







Frick-freezing tunnel at Broadway, Va.

Mexican assembly plants of U.S. auto companies are slowing their imports of auto parts, buying instead from Consolidada.

 Mexican steel mills more or less divvy up the steel market. Thus, Consolidada pretty much has the market for certain light steel products—for instance, wire—all to itself. Altos Hornos concentrates on steel plates and tinplate. Fundidora, though moving slowly into Consolidada's markets, primarily makes bars, rails, and structurals.

Consolidada sees other advantages, too, in Mexico. It says its profit margin is roughly four times higher than a comparable steel mill in the U. S. Credit losses from its 50,000 customers—80% are Mexican-owned companies—are a very low 4 of 1%.

• Growth to Come—In the big picture, Consolidada sees steady expansion ahead. The Mexican steel industry, which includes many smaller producers, is Latin America's second largest, exceeded only by Brazil. The industry hopes to boost present output of 900,000 tons a year to 1-million tons by 1960. Consolidada is putting \$2-million yearly into new facilities.

• Warehouse Service—A big spur to Consolidada's sales is its decentralized warehousing. It stocks a broad variety of products in six warehouses spread around the country. Thus, it can make quick deliveries to customers. Several of Consolidada's competitors consider the carrying charges too high for keeping inventory on the spot—interest rates run 10% to 12% in Mexico's tight money market. But Consolidada thinks its system pays off in fast delivery.

Transportation bottlenecks have been one of Consolidada's main headaches. The company originally built its Piedras Negras mill to be near scrap supplies and natural gas in Texas. But shipments from the mill to Consolidada's Mexico City plants often take 12 days. However, Consolidada sticks by this setup because it's cheaper in the long run to ship semi-finished steel to Mexico City than to cart raw scrap that distance.

• Local Conditions—The company has adapted its operations in other ways to special Mexican conditions. For one thing, it deliberately buys some of its automatic equipment from Europe because the U.S. equipment is "too high speed" for its needs. For another, the company has plowed back earnings rather than turn to Mexico's expensive money market or to Wall Street for financing new plant.

In addition, partly because of Mexico's price control on steel, Consolidada has steadily upgraded its products, thus aiming at higher profits for the costs involved.

• Big Change-The company today is far different from what it was in the

PATENT APPLIED FOR

Lyon quality design is reflected in this new handle with beautifully contoured lines, finger-tip action and finished in durable chrome.

"LYON QUALITY DESIGN makes THE DIFFERENCE!"

STEEL LOCKERS, for example. Look for the design features that pay off for years and years. Compare Lyon construction and you'll see how and why you get so much more in both durability and appearance.

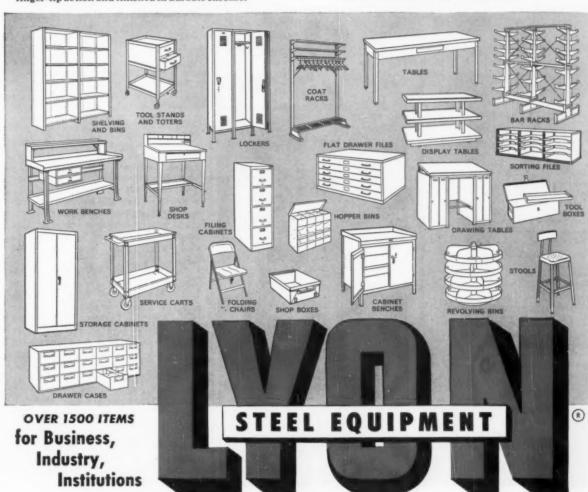
This same quality design makes the difference in every one of the more than 1500 standard Lyon items, a few of which are shown below.

CALL YOUR LYON DEALER. He offers the world's most diversified line of steel equipment. Equally important, he can show you how to get the most for your money in terms of saved time and space.

We can manufacture special items to your specifications.

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A NEW AID FOR COST-CONSCIOUS MANAGEMENT

You can now determine just how much productivity you are losing because the cycle of an automated machine is not perfectly timed.

The new Sheffield Monitorecord* system detects wasted time in each element of the machine's cycle. A printed time graph puts the finger on each timing error and prescribes the remedy.

No better aid to preventive maintenance available. It often justifies its cost the first time it is used.

System installation for each machine is no problem. The small Monitorecord is plugged into the system as needed and moved about at will.

Get all the facts. Write to the Sheffield Corporation, Dayton 1, Ohio, U.S.A., Dept. 44,

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"Our moisture measuring equipment is often operated under difficult atmospheric conditions. However, Bodine motors are rugged and stand up remarkably well. We also find the wide variety of motors we require for ou instruments."—Harry W. Dietert Co.

Talk to a Bodine motor application engineer in the early stages of planning your product. You'll save needless experimentation, and may find one of Bodine's 3500 standard motors ideally suited.

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BODINE Iractional / horsepower MOTORS

.. the power behind the leading products



7827

days of strongman Porfirio Diaz. Back in 1907, two brothers—Harry and Bolling Wright—were buying scrap iron and machinery in Mexico for Isaac Joseph Iron Co. in Cincinnati. During the financial panic that year, Isaac Joseph told the Wrights to close up shop. Instead, they borrowed \$40,000 to buy out the Mexican end.

Before long, they were operating a rolling mill. One of their first big jobs: armoring 12 railroad cars with half-inch

steel for Pres. Diaz.

When U.S. marines took Veracruz in 1914, a Mexican general burst into the company's main offices, threatened to take over the plant. But the Wrights had a winning card up their sleeve: Their main customer was the railroads, which the revolutionary leaders wanted to keep well equipped for carrying soldiers and arms on raids.

When the revolution began cooling off, Consolidada opened its first openhearth furnace, later an electric furnace. Then, in 1936, to overcome the shortage of scrap iron, it built Piedras Negras

near Texan scrap supplies.

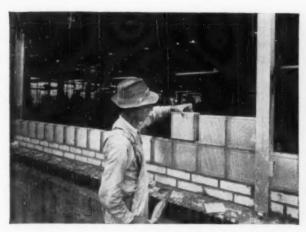
• New Owners—In 1942—when Consolidada was doing a yearly business of around 56-million—Paul V. Shields of Shields & Co. moved in. Pres. Roosevelt, Jesse Jones, and several other officials in Washington had personally told Shields it would be a good idea for U.S. businessmen to put more money into Latin America. Shields had never visited Mexico. Soon after he did, he formed a group to buy more than 50% interest in Consolidada. (About 20% of the company's stock is still in Mexican hands.)

Shields tried out six men as president of Consolidada over a three-year period. Finally, he handed the presidency to a financial man right in his own New York office—Robert Avres.

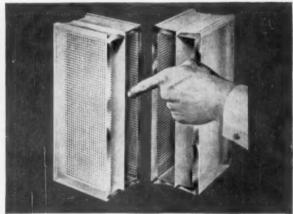
 Strategy—Since taking over, Shields has encouraged two programs: (1) concentrating Consolidada's energies on finished products and (2) keeping in close touch with U.S. steel companies.

Early last year, for example, Consolidada sold its iron ore properties in Chihuahua to Altos Hornos. Shields figured it would cost about \$7.5-million to develop this property. So he got a good price—around \$2.5-million—from Altos Hornos, with a guarantee of getting iron shipments from the property when Altos Hornos developed it.

Consolidada isn't the only steel company that gets help from U.S. steel-makers. Armco Steel Corp. gives advice to Altos Hornos, in which it holds a 5% stock interest. To keep up with latest steelmaking knowhow, Consolidada sends its top men to visit U.S. mills and, in turn, invites steel executives to Mexico City to have a look at the company. END



Glass and mortar panels have nothing to rust, rot or paint



Hollow blocks provide high insulation value



Panels are rugged and breakage resistant; ban dust and dirt



Built-in daylight control avoids use of shading devices

Get these money-saving benefits in your window areas...with PC Glass Blocks

Conventional windows can be mighty costly . . . recurring maintenance, heating and cooling losses, breakage replacement. Then there's the excessive housekeeping caused by dust and dirt infiltration; expensive shading devices and their upkeep. These cost problems face both new plant planners who want to avoid the trouble and folks in existing plants who want to eliminate the headache.

Fortunately, there's a sound solution. PC Glass Blocks. When these blocks are mortared into panels, multiple money-saving benefits result. First, there's

nothing to rust, rot or paint. Second, their hollow and hermetically-sealed construction sets up an insulation value equal to an 8" thick masonry wall. Third, they are breakage resistant, and form an airand-dirt-tight seal. And fourth, because the internal prisms in functional patterns control daylight and ban glare, shading devices are seldom needed.

Interested? See us in Sweet's, or write Pittsburgh Corning Corporation, Dept. G-67, One Gateway Center, Pittsburgh 22, Pa. In Canada: 57 Bloor St. W., Toronto, Ontario.

PC Glass Blocks

PC Glass Blocks mean better looks outside better light inside.



Also manufacturers of FOAMGLAS® insulation

In Business Abroad

Argentina Told to Boost Industry Or Sink Deeper Into Import Debt

Boost industrial production or go further into debt on imported goods. Those are the alternatives that Argentina faces, according to a comprehensive report on the country just issued by the U.N.'s Economic Commission for Latin America.

Some of the gloomy statistics in the report:

• Despite some improvements in its balance of payments, Argentina racked up a \$160-million trade deficit in 1956—on top of a carry-over deficit of \$220-million from 1955.

 Argentina's industrial production rose only 1% last year, compared with an average 3% rise throughout

Latin America.

 Even if Argentina doubles its oil production by 1960, it will still have to import roughly 40-million bbl. yearly to meet rising oil consumption. Thus, oil will continue to be Argentina's No. 1 problem for many years ahead.

ECLA says the only way for Argentina to squeeze out of its predicament is to find a minimum of \$1.2-billion in new capital to build local production and save on imports. To get this kind of money, the country will have to attract U.S. and West European capital—and dampen its occasionally hotheaded fears of foreign investors.

Rising Costs, TV Pressure Squash A London Paper; Two Others Merging

Britain's magazines and newspapers are getting a taste of what American publications have been suffering from—production costs and TV's competition.

This week Britain's weekly Picture Post (circ. 700,000) closes up because of newsprint costs and TV's allure to advertisers. Latest report is that London's News-Chronicle, an independent liberal daily, and the Daily Herald, voice of the Labor Party, are negotiating a merger to avoid going into the red.

Neither the small quality papers—the London Times, for instance—nor the mass-circulation giants such as the Daily Express (circ. 4-million) seem to be hurting. It's the ones in the middle—papers with under 2-million circulation—that are having troubles.

Rockefeller's IBEC Buys Its Way Into Credit Field

Nelson Rockefeller's International Basic Economy Corp. (IBEC) got a boost this week in its effort to enter financial as well as investment and manufacturing fields (BW-Apr.27'57,p122). Rockefeller announced that IBEC, CIT Financial Corp., Transoceanic Development Corp., General Tire & Rubber Co., and the Chesapeake & Ohio's Western Pocahontas Corp. have purchased the assets of American Overseas Finance Corp.

The AOFC was organized in 1955 by Chase Manhattan and four other U.S. banks as a kind of private Export-Import Bank (BW—Oct.15'55,p166). It was intended particularly to extend medium term credit to

U.S. exporters of capital goods.

It's no secret in Wall St. that since AOFC's operations began, the Export-Import Bank has modified its lending practice. Also, an increased tendency on the part of the New York banks to make credit available along somewhat similar lines has ended AOFC's former monopoly in its field of operation.

Under the new arrangement, IBEC will hold 51% of the voting stock in the new company, to be called American Overseas Investing Co., Inc. IBEC and CIT each will hold 40% of the total financial interest, with the

rest divided among the other purchasers.

Rockefeller says he sees the new organization extending its operations beyond financing exports of capital goods, expects that it may enter a variety of lending operations overseas. The new company will be capitalized at \$8-million. The old AOFC had an initial capital of \$10-million with total assets as of Dec. 31 of \$10,996,478. Approximately 90% of the total obligations were for the Western Hemisphere, practically all arising out of export transactions.

Japan's International Trade Fair Is an \$18.8-Million Success

The International Trade Fair in Tokyo, which ended last week, gave Japan's export trade a big boost.

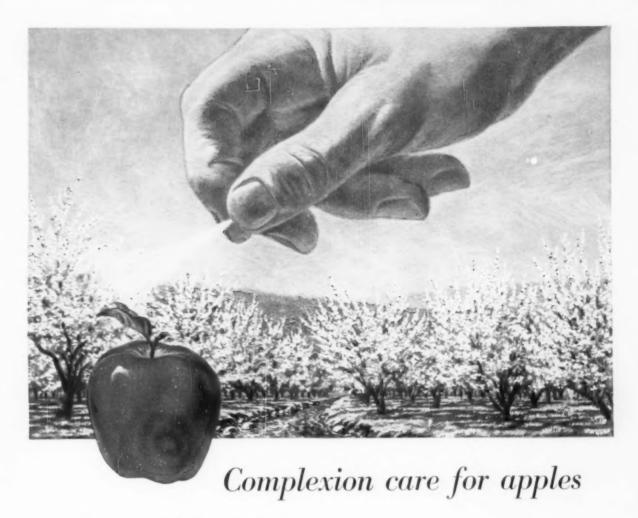
About 3,000 buyers—mainly from the U.S., Canada, Southeast Asia, and India—attended the fair. Machinery was a top seller. Total sales reached \$18.8-million—way above the expected \$11-million mark. Altogether, exhibitors did from 60% to 100% better than at last year's fair.

British Land Rover Steps on Gas In Race for U.S. "Jeep" Market

The Land Rover, Britain's answer to the Willys Jeep, is catching on in California and other Western states.

The Rootes Group has sold the Rover here since 1949. But big sales throughout the British Commonwealth and in other foreign countries have kept shipments to a trickle. Last year, only 100 or so reached the U.S. Now, Rovers are coming in at the rate of 50 to 60 a month—and a promotion campaign is getting under way.

The Rover is priced higher than the Jeep-from \$2,561 to \$3,428 (exclusive of sales tax) depending on the model. But users claim it has many advantages: eight forward speeds, two reverse speeds, tremendous pulling power, fairly smooth riding over rough places, and no rusting to worry about because of its metal-alloy body.



Bigger and better fruit is yours ...with good looks that are more than skin deep

Apples, peaches, and cherries all taste best when they look best. But even before the first bud appears, fruits are constantly exposed to attack from plant diseases that can stunt growth and leave ugly blemishes on the surface.

This battle is now being won with a remarkable liquid chemical spray called CRAG Glyodin. By preventing fungus growth, it improves the overall health of the trees and stimulates the natural glowing color of the fruit.

Farmers—and home gardeners, too—use other agricultural chemicals from Union Carbide. For example, weed killers which cut down hand weeding on the farm and around the home... and a repellent which helps increase milk and beef production by keeping livestock free from flies.

The people of Union Carbide will continue their research to develop more of the products that help bring better foods to your table. FREE: Learn how research at Union Carbide helps improve many of the products you use every day. Write for the 1957 edition of "Products and Processes" booklet D. Union Carbide Corporation, 30 East 42nd St., New York 17, N. Y. In Canada, Union Carbide Canada Limited, Toronto.



UCC's Trade-marked Products include

CRAG Agricultural Chemicals PREST-O-LITE Acetylene EVEREADY Flashlights and Batteries ELECTROMET Alloys and Metals Synthetic Organic Chemicals Linde Oxygen Prestone Anti-Freeze Haynes Stellite Alloys Dynel Textile Fibers Bakelite, Vinylite, and Krene Plastics Pyrofax Gas National Carbons Union Calcium Carbide Union Carbide Silicones



For Very Important Occasions

As her wedding day approaches, no effort is spared to make sure that the bride will look her loveliest for that very important occasion.

There are important occasions in business too—when a new line of products is to be introduced, or a major sales campaign is to be launched—that demand more than an everyday printing job. Oxford Papers are made for just such occasions.

Oxford Papers are used by the best printers and lithographers. There are more than twenty-five grades to choose from, each made to do a particular printing job superlatively well. If you would like helpful advice on printing papers, call your nearby Oxford Merchant or write us direct.

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PRINTING PAPERS FOR BOOKS, MAGAZINES, COMMERCIAL PRINTING, BUSINESS FORMS AND PACKAGING

INTERNATIONAL OUTLOOK

BUSINESS WEEK
JUNE 1, 1957



Presidential Disarmament Assistant Harold Stassen is negotiating in London this week with strong cards (page 33).

Never were U. S.-U.S.S.R. positions so close. Stassen returned to the conference table with comprehensive proposals from Washington on five major items. He can offer the Russians:

- An inspection zone within the Arctic Circle and the opportunity to negotiate for a demilitarized zone in Europe.
- A compromise on cutting military manpower, conventional armaments, and defense expenditures.
- Postponement of nuclear testing pending the creation of a self-enforcing inspection system.
- Diversion of fissionable materials from some nuclear weapons to peaceful uses if the Soviets agree to the U.S. plan for halting future production of nuclear weapons.

All this means that West German Chancellor Konrad Adenauer failed to shake Pres. Eisenhower's determination to go all-out for a limited agreement to take the first steps on arms control. Adenauer feels that any agreement will ease the pressure on Moscow to come to terms on German reunification. But he went along with the President. In exchange, Eisenhower promised to keep pushing for reunification, to consult with Bonn before making any arms control deal with the Russians, and to refuse any significant troop reduction before a German settlement is made.

Anti-American riots on Formosa may have considerable effect on U.S. foreign policy.

A review of American policy on China—which has been postponed several times—seems now to be coming. The supporters—inside and outside the Administration—of the "one-China" policy are on the defensive. The proponents of "two Chinas" have gathered strength.

The destruction of the U.S. embassy at Taipei by a mob is likely to have a more profound, if gradual, effect. The U.S. will not recognize the Communist regime in Peking. But the U.S. may ease its stand against Peking's admission to the United Nations. That position will be under heavy attack this fall when the U.N. meets.

Administration officials feel that the events on Formosa may affect the whole Mutual Security Program, the keystone of U.S. foreign policy. It will certainly provide economy-minded critics of the overseas aid programs with new questions.

The U.S. has been fighting a lone rearguard action against relaxing Western controls on trade with Communist China. Now Washington appears ready to yield to British insistence that only those controls imposed on Soviet trade should apply to Red China.

The fact is that Washington doesn't have much choice. The British made it clear—at meetings of the China trade control organization in Paris

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

this week—that they were ready to break ranks on the China trade issue. Still, London reports that changes in the regulations will be small. They won't do much more than allow British exporters to ship tractors and diesels to Peking.

Six months of political unrest reached a climax in Haiti last week. The black republic of the Caribbean came to the threshold of civil war over the question of presidential succession. This week it looks as if at least a temporary solution has been found.

Left-wing labor leader Daniel Fignole became provisional president, beating out three other candidates. He managed to freeze out Louis Dejoie, candidate of Port-au-Prince's business community. Businessmen led three general strikes, which unseated a military dictatorship.

If he keeps his hold on the government, Fignole faces enormous problems. Haiti's economy is impoverished. The political disturbances that isolated American visitors in their hotels will cut into tourist business, the country's second industry. Droughts and hurricanes have cut coffee exports from \$33-million in fiscal 1956 to an estimated \$21-million. Sagging prices will also eat into earnings from another important export, sisal. There's been a temporary halt to imports financed by the U.S. Export-Import Bank. Topping all this is the growing government indebtedness. It is already \$70-million, while Haiti's national budget is only about \$30-million.

Japan's Prime Minister Kishi is peddling an elaborate Asian economic aid program on a tour of Southeast Asia. In effect, he's proposing a vast Asian development fund—something like the European Marshall Plan.

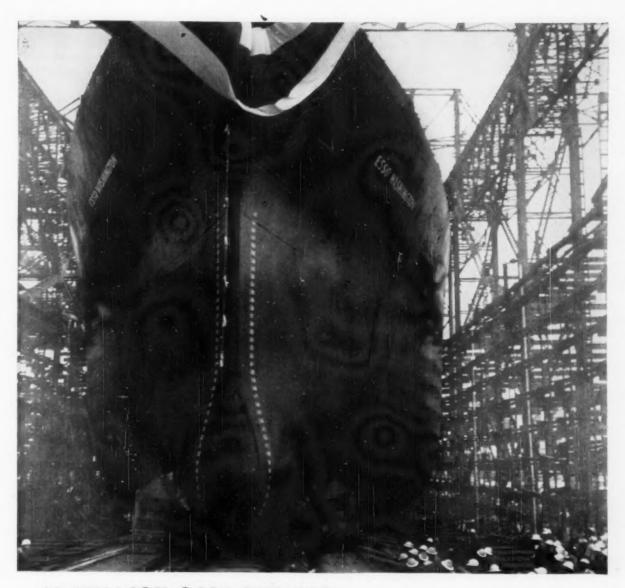
Kishi wants all Asian countries—except South Korea, Formosa, and, of course, Communist China—to get together on their needs for capital. Each would contribute what it could to a fund over which all—including Australia, New Zealand, Canada, and Britain—would have equal voice. The U.S. would be asked to ante up \$200-million to \$400-million a year as the main source of capital.

The Indians and the Burmese have already agreed to study the project. Tokyo feels that, even if Kishi can't get Asian and U. S. backing, the project will dramatize Japan's role as Asia's most important industrial power. The Japanese Prime Minister hopes it will ease any wartime rancor that Asians still hold against Tokyo and set the stage for his visit to the U. S. late this month.

Peru's national holiday—July 28—will be a big event this year. APRA, the powerful anti-Communist Peruvian Socialist party, which has been underground for almost a decade, will hold a legal, open convention.

American investors will be intensely interested to see what line APRA adopts—looking toward the 1962 elections. APRA was born in the extreme left-wing radicalism of the 1930s. Among its slogans then were: "action against imperialism," nationalization of land and industry, "inter-Americanization" of the Panama Canal. Now most of the other Aprista leaders have taken up much more moderate positions.

But the Aprista left-wing is still extreme. Furthermore, in last fall's elections, the Communists and other left-wingers made heavy inroads on APRA's following in the trade unions—particularly in poverty-stricken southern Peru.



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year we supplied more than twice the oil we did ten years ago. This year our customers will need still more.

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It was good news for our 156,000 employees... whose wages and benefits came to \$906,000,000.

It was good news for governments. Operating and income taxes, import duties, con-

sumer taxes and other payments from our operations brought to the United States and other governments a record \$2,171,000,000. That was five times the dividends to shareholders, more than double the payroll and benefits to employees.

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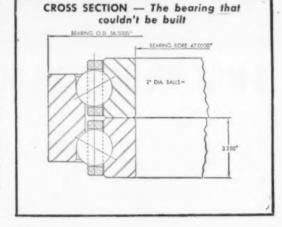
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In Washington

Small Businesses Get Federal Loans Despite Congressional Haggle Over Funds

Loans granted by the Small Business Administration reached a record 784 for \$38.8-million in April—including nearly 500 held up for several months by a Congressional haggle over giving the agency more money to lend to small businesses (BW-Apr.27'57,p151).

Disaster loans also reflected the money tie-up—there were 326 O.K.'d for \$2.4-million in April. Of the business loans, nearly 70% of the money was loaned on a joint basis with SBA and local banks sharing the burden.

Despite a rash of disaster loan applications in the Southwest, SBA now thinks it has enough money to carry it through June 30, when its charter runs out.

Next week, Senate hearings on Administration and Democratic bills to make the agency permanent and give it more to lend will determine how much SBA can lend, and how freely. Both Republicans and Democrats favor raising the agency's lending fund and easing procedural restrictions.

Congress Wants the Inside Dope On Dangers From Radioactive Fallout

A Congressional panel this week opened the most extensive hearings yet undertaken on radioactive fall-out—and whether the dangers are real or imaginary.

Rep. Chet Holifield (D-Calif.), chairman of a special subcommittee of the Joint Congressional Committee on Atomic Energy, laid out a fairly narrow road. The subcommittee, he said, wants only facts—and not moral, philosophical, or political conclusions.

But with two to three weeks of hearings in prospect, what Holifield wants and what the committee gets may be two different things. Sen. Clinton P. Anderson (D-N.M.) sparred at length with the first Atomic Energy Commission witness, Dr. Charles L. Dunham, on (1) why AEC hasn't done more to evaluate potential danger of radioactive discharge from atomic power plants, and (2) why AEC distributes "nice literature" minimizing dangers, while many scientists express public alarm about radioactivity.

Metal Producers, Woolen Textile Makers Get Backing on Tariff Policy Issues

"A sliding-scale tariff protection for domestic producers of lead and zinc" is the way Interior Secy. Fred A. Seaton described the bare-bone specifics of the Administration's long-range mining policy that he sent to Congress this week. The proposed lead and zinc import excise tax rates are part of a domestic mining industry support program that has been anticipated

MORE NEWS ABOUT GOVERNMENT ON:

• P. 128 Philadelphia Hires Its Own Lobby.

for more than three years (BW-May11'57,p134).

The doctrine includes (1) increased research and development funds for technical aid; bonus payments for production of beryl, chromite, and columbium-tantalum; and (3) a review of tax laws affecting mining. The doctrine also recommends continued government purchases only of already designated amounts of strategic metals for the stockpile.

The proposed increase in lead and zinc import taxes would range from \$4\epsilon\$ to \$4\epsilon\$ a lb., depending on the domestic price levels. The object is to stabilize domestic price of lead at \$16\epsilon\$ per lb., zinc at \$13\epsilon\$ e. Current prices are \$15\epsilon\$ for lead and \$11\epsilon\$ for zinc.

Domestic miners had expected the doctrine to contain more government aid. Sen. James E. Murray (D-Mont.), chairman of the Senate Interior Committee, which has been pushing for a strong support program, will begin hearings on the new proposals soon.

The White House this week also announced a continuation of present tariff quotas on woolen textiles through the remainder of 1957—shipments above 14-million lb. paying the regular 30¢-37½¢ duty plus 45% (instead of the regular 20%-25%) ad valorem.

However, domestic woolen textile makers are still pressing before the Office of Defense Mobilization their appeal for more protection under the "defense essentiality" clause in the trade laws.

House Takes a Hand in Settling The Fate of Embroiled Meat Packers

Activity on proposed legislation transferring regulation of unfair trade practices in the meat packing industry from the Agriculture Dept. to the Federal Trade Commission (BW-Mayl1'57,p72) shifts to the House early this month.

A Senate antitrust subcommittee last week completed its hearings on the bill, sponsored by Sens. Joseph C. O'Mahoney (D-Wyo.) and Arthur Watkins (R-Utah), to put the meat packing industry back under FTC.

Asst. Secretary of Agriculture Earl L. Butz, opposing the bill, offered instead an amendment to keep meat packers under Agriculture's supervision while plugging a loophole in existing law through which non-packers—primarily food store chains—can escape FTC regulation by acquiring an interest in meat packing operations.

A joint hearing by the House Antitrust Subcommittee and a subcommittee of the Interstate & Foreign Commerce Committee is scheduled next week on the conflicting bills.

The joint hearing will be headed by Antitrust Subcommittee Chun. Emanuel Celler (D-N.Y.) and Interstate Commerce Subcommittee Chun. Peter F. Mack (D-III.). Celler supports the O'Mahoney-Watkins approach, but there's support here for Agriculture, too. Rep. William S. Hill (R-Colo.) introduced a bill last week patterned on Agriculture Dept.'s recommendation.

The Agriculture-sponsored amendment could be all opponents of the more drastic O'Mahoney-Watkins bill need to block any action in this session of Congress.

LOBBYISTS FOR A CITY: Maurice Rosenblatt, left; Harry J. Maginnis, center, and William L. Sturdevant, Jr., are in Washington to beat the drum for the city of Philadelphia.

City Hall

Philadelphia is believed to be the first city with a Washington lobby on its payroll. Object: more federal aid.

N THE LAST three decades, a drastic change has put American cities in a tight financial squeeze. Their costs have gone up, but their sources of tax revenue have been pre-empted more and more by federal and state governments.

This situation has made cities increasingly reliant on federal handouts. It's a rare day when dozens of city officials from all points of the compass don't descend on Washington to plead for more money to solve such problems as slum blight, airport development, water and air pollution, and so forth.

Now Mayor Richardson Dilworth of Philadelphia is taking the ultimate step in city-federal liaison. Dilworth, an ambitious politican and a dynamic student of government, has hired full-time Washington lobbyists to look after his city's diverse interests in the capital.

• Could Be Politics—Dilworth's partner in the Democratic reform move that took over Philadelphia in 1951, Joseph S. Clark, has since moved to the U.S. Senate. Dilworth is now believed eying the governor's mansion at Harrisburg, Political consequences of having Washington lobbyists to aid his city administration may not be a principal consideration, but Washington politicos insist they have not been overlooked.

As far as is known, this is the first time a single city has gone to the length of putting professional Washington lobbyists on a municipal payroll.

I. A City's Wants

"Here is Mayor Dilworth's problem: His city has 2% of the nation's population; is it going to get 2% of the nation's representation?"

The speaker is Maurice Rosenblatt, one of the partners (picture) in National Counsel Associates, the firm that Dilworth retained.

Examination of the priority list Dilworth handed the firm shows clearly that the mayor's idea of improved representation is to get more federal money for Philadelphia. This is the list:

• Passage of legislation authorizing

 Passage of legislation authorizing federal agencies to withhold a 1½% city tax from salaries of federal employees in Philadelphia. (A Philadelphia city official tells BUSINESS WEEK that passage of withholding authority would be worth at least \$1-million to the city, not only in increased collections but also in sav-

Hires Its Own Lobby

ings in paperwork and enforcement.)

 Appropriation of \$1.1-million for work on Independence National Historical Park in the center of Philadelphia. The Interior Dept. budget for fiscal 1958 went through the House with only \$5,800 for the project-and that for grass seed. Dilworth is concerned not with grass seed but with getting on with the work of razing condemned buildings and renovating historical structures.

· Full-scale improvement, by the Corps of Engineers, of the Delaware Valley, including-foremost-an extra \$16.5-million for deepening the Delaware channel from 35 feet to 40 feet.

· More federal aid in urban re-

Rosenblatt puts it this way: "Wherever there is a national welfare or financial bill, you can be sure that Philadel-phia is interested." Thus, the city lobbyists, beyond that priority list, are on the lookout for ways to advance proposals for federal spending to aid school construction, to assist cities in dealing with the problem of juvenile delinquents, and to develop underground civil defense shelters (which can double as municipal parking lots).

• Broad Duty—Philadelphia's govern-

ment hands the lobbyists a broad assignment. They will, for example, work against some legislation. A current case in point is the bill to free independent natural gas producers from federal regu-

Then, too, Rosenblatt says his firm will take care of chores in the administrative agencies around Washington. For example, Philadelphia dreams of becoming an important international air terminal. That means work to do at the Civil Aeronautics Administration and the Civil Aeronautics Board.

"And there's the matter of general intelligence," Rosenblatt continues. For example, an agency may need a special kind of engineer. We call Philadelphia and say, 'Haven't you got a good man?' A Democrat may be required, or a Republican; the point is, let's get a Philadelphian."

II. The Setup

Partners in National Counsel Associates, which was created only two months ago, are Rosenblatt and William L. Sturdevant, Jr. To assist on the Philadelphia contract, NCA employed Harry J. Maginnis, an attorney.

In some respects, Maginnis is the key man. For one thing, he is a Pennsylva-nian. Rosenblatt is a Midwesterner; Sturdevant, a Southerner. Besides, Maginnis is Republican, with a solid

legislative background, first as assistant to the late Sen. Robert A. Taft and, later, as aide to Sen. Edward Martin of Pennsylvania.

Rosenblatt, a veteran lobbyist, has been best known in Washington for his leading role in the liberal Committee for an Effective Congress, which, among other things, helped rally opposition to the late Sen. Joseph R. McCarthy while he was at the peak of his power. Sturdevant was Sen. Estes Kefauver's press assistant in the senator's losing bid for the Vice-Presidency last year.

· Voice of City-With three Washington agents of this background. Democrat Dilworth has put his city administration in a position at least to be heard in all vital political areas

of Washington.

The price is \$12,000 for the remainder of this year. (National Counsel Associates has other clients-Independent Airlines Assn., representing the socalled non-scheduled carriers, and the Third-Class Mail Users Assn.-that pay higher fees for Washington representation.) Setting up and staffing a Philadelphia office in Washington would have cost much more, though Dilworth did consider it.

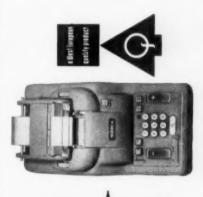
He looked over the city's payroll and could not find a man who met the two principal requirements: basic understanding of all the city's problems and a sound working knowledge of Washington's ins and outs.

Finding no such combination of talent. Dilworth chose to buy the more important qualification of Washington knowhow-and to educate his lobbyists in Philadelphia's problems as they go along.

· Professional Jealousy-There's a certain hazard involved. Philadelphia has six members in the House of Representatives-five Democrats and one Republican. Some of them have complained that Dilworth is trying to make them "obsolete." What they really fear most is that the public will get the impression that they are not looking after the city's interests.

To ease their pain, they have been assured that the lobbyists will aid them in all possible ways and-most important-that one or more of the congressmen will get credit for whatever is accomplished.

Municipal relationships with the federal government are becoming more and more important, making it essential that we have greater access to research. information, counseling, and legislative consultation," Dilworth says. "Our Congressional delegation should have on-the-scene contact with official city representatives." END



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Auto Union to Bargain For Retired Workers

UAW has 78,000 retired members (right), will soon have 100,000. It is earmarking funds for them and those who are nearing retirement—and it may bargain for more.

THE United Auto Workers took new and dramatically important steps this week to bring 78,000 retired members closer to the union and to cudgel management with a brand-new fringe demand: pre-retirement benefits.

For the first time, the union will have a guaranteed source of funds for its pensioners' program, and the full weight of the approximately 1.4-million working members behind the effort.

What happens beginning this weekend sounds routine, but isn't. Under changes in the union's constitution at the recent convention, 2¢ of a 50¢-amonth dues increase goes directly into a fund for the retired workers' program. That means about \$28,000 a month, half to be used by the locals and half by the international.

• Firm Footing—In the past, any activities sponsored by international UAW for its retired auto workers were on a hand-to-mouth basis, financed only as funds could be diverted from other union programs. Now, the \$14,000 flowing into the union's Solidarity House headquarters every month can be used to assist workers in making a transition to retirement. In time, this may tend to make management broaden its program, too; it could prod employers into doing much more for the retired than merely pay them a pension.

The funds will be spent for two segments of the union's membership—those already retired and those still in the plants but nearing retirement age. UAW estimates the number of retirees is increasing about 1,000 per month and will hit a total of 100,000 within the next few years.

The union believes that one of its major tasks is to prepare this sizable group of elderly workers for retirement. Plans for setting up a pre-retirement program promise to figure prominently in UAW's negotiations with auto companies when contracts reopen.

 Identifying the Worker—The longrange, permanent program for older and retired UAW members was worked out over the past two years by the union and a national public advisory committee composed of important figures in the field of geriatrics. Its significance at the bargaining table lies in a demand for pre-retirement programs co-sponsored by labor and management "with both time off and funds for same to be regarded as workers' benefits, subject to collective bargaining."

"We will attempt to identify the worker before he retires," says Warren Solenberger, a member of the union's Social Security Dept., which helped with the program. "Premature retirement is an increasing concern as a result of automation," he says. "To meet it, we much reach the workers in the plants before retirement, not after."

before retirement, not after."

In his president's report to the convention in Atlantic City, Walter Reuther explained the purpose of preretirement programs—"to begin to prepare workers for the change that retirement will bring into their lives so that they can make the emotional adjustment and . . [make] full use of the new leisure which their years of productive work have earned for them." He indicated that management will be called upon to contribute substantially to the success of its workers' emotional "adjustment."

• Community Program—"We believe that our program . . . should be worked out as part of a broad community program, and not as a narrow trade union program," Reuther says. "This means that our union will be committed to working with other groups in the community in trying to develop community-wide programs available to all retired people."

"A first step in implementing the program was the creation of a special department at the international UAW level to coordinate and direct it. Standing committees in all local unions also are being established to assure participation at the grassroots level. The retired workers' program previously fell under the union's Recreation Dept. and was financed from general union funds.

• Drop-In Centers—Through permitting union locals to spend half of the money that supports the program, UAW hopes to encourage more "drop-in" centers, which have proved popular at the local level. There now are three such centers in Detroit (BW-Apr.17



'54,p158) where retired workers congregate to play cards, talk, pursue hobbies. Transportation problems have curtailed attendance in the sprawling auto center, however, and made the drop-ins primarily neighborhood hangouts.

Some 30 communities in the U.S. and Canada now have retired workers' programs, and an estimated 20,000 former auto workers and their wives participate in them. Expanding the program's scope is expected to increase that number considerably. Other activities, such as outings and parties, also are expected to flourish.

 Detroit Model—The UAW also plans a model retired workers' center in Detroit as a pilot demonstration project. The center, according to Reuther, will "provide the full range of activities



and services desirable to meet the leisure-time, health, counseling, and related needs of retired and older workers." He emphasizes it will be "part of the community" and will serve as a training and demonstration center that other communities can imitate.

"The whole idea is to prepare the older worker for retirement and then, when he leaves the plant, to keep him off the shelf," says Solenberger. "He must be kept going psychologically as

well as physically."

Political action groups of the UAW will work with retired workers on a more intensive level under the new program. Olga Madar, director of the Recreation Dept., pointed up the political potential in a recent report.

"The retired workers were [since the

last convention] also involved in special campaigns to achieve improvements in social security legislation, housing legislation, and in the development of a state legislative program to provide services for the aging," she said. "Their interest in legislation was not confined to matters relating to older people as was demonstrated by the cards and letters they sent in opposition to the Fulbright-Harris gas bill."

 New Lease on Life—Adoption of a permanent program for older and retired workers is the firmest acceptance yet for a group that won its first recognition on a bitter winter day more than five years ago. In December, 1951, 900 hardy ex-auto workers braved a blizzard to attend a little-publicized "social gathering" sponsored by the Recreation Dept. Ever since then, the oldsters have played an increasingly important role in the UAW.

• Far From Goal—The union's initial goal for its senior members was (and still is) to achieve economic security through collective bargaining and legislative pressure. Reuther feels substantial progress has been made toward that end, but he adds quickly: "We are still far from attaining the goal of truly adequate old age and disability protection."

A second phase in the program grew out of the 1951 convention, when the UAW voted continuing membership with full rights and privileges for retirees, although they do not pay dues. The "drop-in" centers and increased programing followed. END

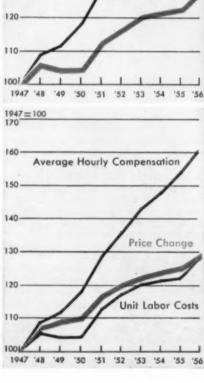
A New Look at Prices and Wages

From 1947 to 1956, average hourly compensation of all employees (including wages, salaries, social security, pensions, and other "fringe" benefits) increased 61%.

But, because of rising productivity, unit labor costs increased only 28%.

So unit labor costs have now risen about as much as prices — but have lagged behind price hikes through most of the postwar years.

Date: U. S. Department of Commerce: Bureau of Labor Statistics.



A VERBAL BATTLE has raged all throughout the postwar years—both in closed negotiations between unions and management and in public policy debates—over the question of just how much wage increases have had to do with price inflation. The key to the argument is whether or not wages have been gaining faster than productivity.

Theoretically, if productivity rises as much as wages, then prices need not rise at all. That's because higher paid workers turn out proportionately more

goods.

• Conflicting Views—Those who hold that wage increases are responsible for the price rises in the postwar period argue that steep union pay boosts have not always been accompanied by similar rises in productivity. What has happened, they say, is that industries experiencing only small productivity rises, nevertheless, have been forced to raise wages as much as industries with larger productivity gains to their credit. And the result has been an over-all increase in prices, the argument goes.

Opponents of this wage inflation thesis counter that the high wage increases could not spread to industries where productivity gains were small if it were not for the fact that inflationary conditions already existed. They also claim that workers' real earnings actually have risen only as much as their productivity and that higher money wages have been necessary just to enable workers to remain in the race with the rising cost-of-living.

• BLS Study—The latest episode in

 BLS Study—The latest episode in this long-run debate develops out of a report on productivity, carnings, costs, and prices Ewan Clague's Bureau of Labor Statistics prepared at the request of the Senate-House Joint Economic Committee (BW—May25'57,p52).

Clague's report showed that average hourly earnings, including fringe supplements, rose 61% from 1947 to 1956, while output per employee man-hour rose only 26%. This fact was quickly seized upon by a number of Washington correspondents as proof that wage gains had in fact greatly exceeded productivity and were the principal cause of the 28% price rise for nonfarm goods and services.

 Warning—But Clague himself made no such interpretation. And the BLS report urges extreme caution in interpreting the data to prove cause-andeffect relationships. "Prices," says the report, "are subject to numerous influences of changing market conditions and costs of production, and a change in price cannot be explained by reference to any single factor, even one as large as labor costs. Where the figures



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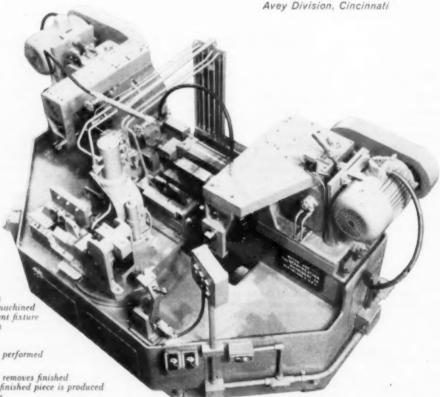
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- 4. Table indexes back to original position
- 5. Operator places new part in fixture, removes previously machined part and places it in adjacent fixture for second milling operation
- 6. Table indexes
- 7. Second milling operation is performed simultaneously with first
- 8. Table indexes and operator removes finished part. From this point on, a finished piece is produced with each index of the table



indicate that prices and unit labor costs showed about the same increase, or that one or the other showed a greater increase during a particular year or period of years, this should be taken as a description of what happened and not necessarily as an explanation of what 'caused' the change."

Although the BLS report ducked the issue of causes, the burden of the report—which was clarified by Clague in an interview with BUSINESS WEEK—cast considerable doubt on the thesis that wage inflation had been the primary cause of price inflation through most

of the postwar period.

· Unit Labor Costs-The relevant data for studying the relationship between earnings and prices, the report holds, is not average hourly compensation but unit labor costs. An increase in average hourly compensation means an increase in labor costs only to the extent that it exceeds the increase in productivitybecause unit labor costs are affected not only by the increase in hourly earnings but also by the number of man-hours required per unit. "It is in this sense," says the report, "that productivity is a crucial element in the wage-cost-price relationship . . . the margin within which wage increases can be granted without increasing production costs or curtailing the amount available for other income payments.'

Average hourly compensation increased 61% from 1947 to 1956, but unit labor costs rose only 28%. And prices of goods and services produced by those workers increased 28% over the 10-year period (charts, page 132).

Does this establish proof of a wagecost-price inflation? Clague argues not necessarily—no more than it establishes proof that wage boosts are a direct re-

sult of rising prices.

One obvious way of trying to determine which caused which would be to measure whether labor costs or prices moved up first. Subjected to this test, unit labor costs seem to have followed prices uphill through most of the postwar years—and particularly in those years when the inflationary heat was most intense.

· What Happened-Clague's study starts with 1947 because that was the first postwar year in which BLS had adequate benchmark data on productivity. The immediate postwar inflation, Clague says, was essentially due to the vast liquidation of wartime savings and heavy consumer demand for goods that weren't available during the war. At the same time, workers, who had been enjoving heavy overtime earnings during the war, were striving to maintain their weekly take-home pay through boosts in hourly earnings. But Clague holds that it was the terrific liquidation of wartime savings and the buying spree. rather than the boost in wage rates,

that shoved prices up so fast in 1946-1948. Nothing but a scrious postwar recession and a big rise in unemployment could have prevented that inflation, says Clague.

In 1949 and 1950, unit labor costs actually declined to 104.5 (1947 equals 100) from their 1948 level of 106. But prices moved up from 106.5 in 1948 to 108 in 1949, and 109 in 1950. So prices were rising in those years, while unit

labor costs dropped a bit.

In 1951, both prices and unit labor costs took a big leap upward. The reason, Clague says, was Korea, and the attempt to build a wartime economy in a hurry on top of an already fully employed peacetime economy. In 1952 and 1953, both prices and labor costs continued to move up more slowlybut labor costs went faster than prices. In 1953, labor costs had just about drawn even with prices for the period that began in 1947. Then in 1954 and 1955, prices widened the gap above labor costs a bit further. The reason for this, particularly in 1955, says Clague, was the onset of the great capital spending boom, which pushed up prices of capital and industrial goods faster than wages.

The year 1956, however, looked like a model of cost inflation—for productivity stood still, average hourly compensation climbed 4½%, and unit labor costs rose by the same percentage. Non-

farm prices rose 3.2%—apparently pushed there by rising unit labor costs.

• Mixed Reaction—Some economists and businessmen don't accept Clague's evidence that labor costs have lagged behind prices during most of the postwar years as conclusive proof that rising wages were not the chief initiating factor in the postwar inflationary trend. They argue that employers often put their prices up first, in anticipation of coming wage boosts that they felt were inevitable. Hence, they maintain, Clague's data won't acquit the unions of the charge of having caused inflation by forcing excessive wage demands.

Meanwhile, labor spokesmen will use Clague's data to show that labor's income in the postwar years—measured in terms of constant prices—has increased only as much as the gain in actual productivity, and will insist that fast-rising money wages have constituted the workers' only defense against price hikes induced by other factors, such as wars, growth in public and private debt, consumer buying sprees, and capital spending booms.

It's clearly going to take fuller and deeper analyses to prove or disprove the wage inflation thesis. For now, Clague is satisfied with a cautious and essentially negative conclusion: "Union rates didn't always lead the procession and

aren't necessarily a major originating factor in inflation."

Teamsters Are Given a Chance

AFL-CIO withholds action to give huge union time to get back in good graces. But more than Beck will have to go.

The way has now been cleared for the International Brotherhood of Team-

sters to stay in AFL-CIO.

IBT's Pres. Dave Beck announced last weekend that he will not seek reelection. There are growing indications that he might either resign this month or take an extended leave of absence, under pressure from othe: Teamsters officers, among them the union's strong man, Midwestern V-P James R. Hoffa.

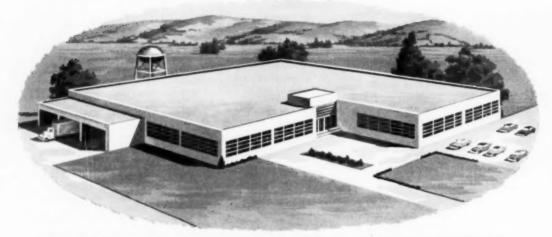
• Probation – Meanwhile, AFL-CIO's executive council put the Allied Industrial Workers and Distillery Workers on one-year probation, to allow them time for further housecleaning. In doing so, the council set a precedent that can be followed with the Teamsters.

The council took the probation action after it found that two of three member unions have made progress in getting out from under the grave charges against them. The AFL-CIO body wasn't satisfied with Laundry Workers clean-up moves, and suspended that union.

More than Beck will have to go from positions in power if the Teamsters is to regain the good graces of AFL-CIO. Reportedly, spokesmen for the IBT executive board have given the federation assurances that others will be ousted, too, once Beck leaves office, and that changes will be made in the union's election and fund-handling procedures at the convention this fall—to conform to new AFL-CIO codes covering internal union democracy and financial practices.

 Time to Act—The Teamsters may be able to do this fast enough to avoid probation—or any other action by AFL-CIO. The federation's Ethicai Practices Committee has delayed further steps against IBT to give the developing clean-up moves time to show progress and direction—or a lack of either.

Hoffa will be the key man in the union's next maneuvers. Although he is under two federal indictments on charges of attempted bribery and wire-tapping, Hoffa still can count on strong support from a substantial part of IBT. He may not be able to succeed Beck as president, but certainly he will influence the union's choice. END



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In Labor

Hatters Union Loses Fight To Bar Transfer of Work

The United Hatters, Cap & Millinery Workers has lost a fight to bar an employer from transferring operations during the life of its union contract. However, an arbitration award guarantees displaced workers severance pay from the employer, the John B. Stetson Co.

Several weeks ago Stetson announced plans to move finishing work from a subsidiary, Mallory Hat Div., in Danbury, Conn., to its Philadelphia plant. Both plants are under Hatters contracts. While the transfer would add to union jobs in Philadelphia, it would idle between 250 and 300 in Danbury.

The Hatters served notice that the transfer would not be acceptable before the end of the Mallory contract in June, 1958; it instructed its members at Stetson's Philadelphia plant not to handle any transferred work.

Stetson's president, David Harshaw, appeared before the Hatters executive board to plead the company's case. An agreement to arbitrate the dispute followed.

Last week, arbitrator Joseph D. McGoldrick handed down an award that provides:

 Stetson must set aside \$100,000 as severance pay for workers who lose jobs.

 It must pay them their shares of a pension fund, an estimated \$25,000 for the group.

 In return, the union must withdraw its orders barring Philadelphia workers from handling trimming and finishing transferred from Danbury.

Factory Pay and Real Earnings Show First Dip in 30 Months

Factory take-home pay and the real earnings of industrial workers declined in April, interrupting 30 months of steady increases.

The Bureau of Labor Statistics reported last week that:
• Net spendable earnings—the workers' pay after tax

deductions—dropped 33¢ a week from March to April.

• Real earnings, the buying power of the workers' takehome at current price levels, declined nearly 1% during the month.

AFL-CIO Plans to Intensify Civil Rights Program in South

The AFL-CIO plans to step up its fight for civil rights in the South, despite almost certain opposition from some pro-segregationist locals.

Last week, the federation named Charles S. Zimmerman of the International Ladies' Garment Workers' Union as new chairman of its Civil Rights Committee. He succeeds James B. Carey, AFL-CIO vice-president

and head of the International Union of Electrical Workers, who resigned.

Zimmerman is a vice-president of ILGWU and an active leader of several state and national anti-discrimination organizations. He will head a federation program that, according to AFL-CIO Pres. George Meany, will "take our best skill [and] much patience and dedicated effort; it will also take time."

This was, perhaps, an indirect reference to Carey's resignation with critical remarks about the slow progress of the federation's civil rights program—and, particularly, about its failure to end bias within its affiliated unions. Shortly afterward, AFL-CIO cracked down in two situations that Carey criticized.

Zimmerman's appointment was announced at a conference on civil rights, during which Meany noted that some of the 68,000 locals of AFL-CIO affiliates still ignore the federation's civil rights policies.

Administration Revises Proposals For Controlling Union Funds

The Eisenhower Administration this week revised its proposals for federal control of union health and welfare funds—and substantially boosted the chances for legislation this year.

Labor Secy. James P. Mitchell appeared before a Senate labor subcommittee with 10 amendments to the Administration's original control bill. In the new form, the proposals come close to those in a Democratic measure sponsored by Sen. Paul H. Douglas of Illinois.

The changes advocated by Mitchell include mandatory disclosure of fund details and criminal penalties for filing false statements. The only major difference now remaining between the Administration proposals and those of Sen. Douglas involves the regulatory agency. Mitchell wants the Labor Dept. to have control over the funds. Douglas favors turning supervision over to the Securities & Exchange Commission.

Supreme Court Upholds Unions on Two Appeals From Tennessee Rulings

Two Tennessee state court rulings appealed by unions were reversed this week by the U.S. Supreme Court. In brief orders, with no written opinions, the Supreme Court unanimously upset:

 A state court order directing a Teamsters local to end its refusal to handle so-called "hot cargo" goods being shipped to or from a Nashville iron works involved in a strike dispute with the AFL-CIO Iron Workers.

 A state court injunction under the Tennessee rightto-work law against picketing to enforce employment of only union labor.

In reversing the two state rulings, the high court merely cited earlier decisions of its own, holding states may not use state laws to act against unfair labor practices specifically within the exclusive jurisdiction of the National Labor Relations Board.

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THE MARKETS

Wall St. Talks

... about bonds and golf balls . . . those bond prices . . . copper dividend cuts . . . dip in carloadings.

Now Wall Street goes in for premiums to stimulate business. A municipal bond house advertises that each buyer of its wares will receive a gift of one dozen "top-quality golf balls."

Hurting! The syndicates handling the recent slow-moving Central Maine Power 42s and Potomac Edison 42s let those new bond offerings seek their "proper level" in the open market last week. The former, first offered at 102.8% of par, promptly dropped to 983 bid. For the Potomac Edisons, the best bid was only 973 vs. their initial 101.7 asking price.

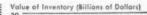
One of those copper-dividend cuts Streeters were expecting (BW-May18 '57,p165) came last week. Inspiration Consolidated Copper, which earned only 80¢ a share in the first quarter vs. \$2.08 in 1956, cut its quarterly payment from \$1 to 75¢.

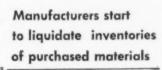
The 1957 carloadings trend has some analysts worried. Last week loadings fell to levels 7.2% under 1956 and 6.2% below 1955. They also slid under the previous week's figure though, seasonally, they should have risen. Chief victims have been the Eastern industrial roads. N. Y. Central's April net dropped 54% under 1956; Pennsylvania RR's net was off 41%.

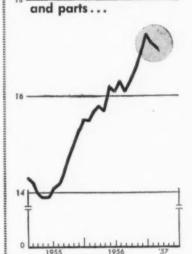
Merger rumors: Sharon Steel Corp., seeking to diversify its strip steel operations, is about to absorb two smaller companies owning facilities for rolling sheet steel. . . . Bell Aircraft will acquire Sterling Precision Corp.

Why Streeters have been bullish on oils: In the first quarter, reports Carl H. Pforzheimer & Co., earnings of 45 leading oil companies added up to over \$1.1-billion, almost 19% more than in January-March 1956.

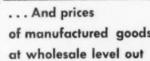
New corporate financing reached a record peak in the first quarter of 1957. The SEC reports total offerings of \$3.6billion-20% above the fourth quarter of 1956, 60% above the first quarter. Most of the increase occurred in bond, note, and debenture issues, which totaled \$2.8-billion and included a heavy volume of utility issues.

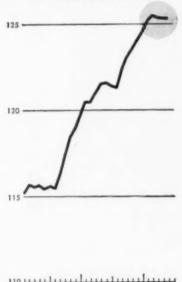






Index of Prices (1947-'49-100) ... And prices of manufactured goods





Data: Bureau of Labor Statistics.

Prices Take a Breat

Inventories have shaken down a bit, but there's no sign of decline in demand.

Data: Dept. of Commerce.

In fact, some items may be tight again by fall.

Most of the cross currents in the over-all economy find their final reflection in the above charts. What it adds up to, so far, is a very moderate inventory adjustment that has taken the zip out of prices.

The rise in commodity indexes got its start from the 1955-56 upsurge in manufacturers' orders and sales. Factories had to have larger inventories for the expanding volume of business. But there's always froth on such a brew-a little overbuving just to play safe.

Early this year when the auto industry began paring output into line with dwindling sales prospects, the tightness in raw materials vanished in a twinkling. No longer was there any need for "precautionary buying"; actually, there was less need even to maintain normally adequate working stocks, because delivery time was greatly shortened.

Simultaneously, there was another pressure to reduce purchases: Tight money put a premium on maintaining minimum inventories. Working capital could be replenished and costly borrowing avoided by such a course. More-over, in March, there was the press for cash to pay taxes.

· Some Prices Tumble-All this had a dampening effect on the prices of sensitive commodities. The tumble in copper and steel scrap were dramatic evidences. But the same forces were working in slower-moving prices, too. By spring, there were few signs of inflation in the markets for things industry buys.

To that extent, this "adjustment" resembles the typical inventory shakedown. Normally, however, such things are touched off by declining demand for the things industry sells.

· But Demand Steady-This time, there has been no such slump. Government, as a customer, has displayed a growing appetite. Business spending for new equipment has held at its unprecedented level or even expanded a little. And consumer buying has been averaging about 5% higher than a year ago, at least in dollar terms. (In fact, consumer demand has been such that the price of goods at the retail level has continued to rise despite weakness in primary markets.)

Granting that there has been disappointment in auto sales and in the failure of major appliances and house furnishings to move at a faster rate, there

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still has been nothing to inject an air of panic into inventory reduction.

This helps account for the fact that commodity prices, on the average, have leveled out more than they have declined. (Of course, high and inflexible production costs also deter producers from cutting prices as long as there is any chance to hold the line.)

 Prospects—Meanwhile, the position of the purchasing agent is by no means as comfortable as the price curve would make it look;

• Steel (along with other metals and numerous things made of metal) is scheduled to raise prices this summer, due to wage increases written into existing labor contracts. There already are evidences, in fact, of some advance buying in steel to beat the price boost that's expected July 1.

 Auto companies will be back in the market for normal quantities of steel by late August to prepare for newmodel runs. This is expected to strain the supply situation, at least temporarily.

 Business conditions generally, in the view of many analyses, will be picking up by autumn. If the advance should be at all rapid, we could have a new wave of inventory accumulation—and very possibly the customary tendency to overbuy a bit.

• Shrewdness Needed—Each of these problems—no one of which carries quite the same degree of emphasis or of timing—places a premium on astute buying policy in the months ahead.

Inventory policy also will be influenced by reports of a "comprehensive" program taking shape in Washington to aid domestic producers of numerous nonferrous metals. Trade reports place particular emphasis on what may be done for lead and zinc, which have been among the recent weak sisters.

On the other hand, any evidence that progress is being made on even a limited disarmament plan in the London conferences (page 33) will probably result in new commodity price nervousness, particularly in the metals.

And there's also the Federal Reserve's monetary policy to be reckoned with in relation to corporate needs for working capital. The tendency of the cost of living index to keep on rising, despite weakness in basic raw materials, gives little hope as yet for an end to tight money.

The Market's Selectivity: A Sampling

SOME OF THE LEADERS		AND SOME OF THE LAGGARDS				
	Recent Level		Recent Level			
C. C	P.S.	6	15.			
Commons	Feb. Low	Commons	Feb. Low			
Lukens Steel	+119.4%	W. Virginia Pulp & Paper	+3.49			
Universal-Cyclops Steel	+62.4	Bucyrus-Erie	+3.4			
Schering Corp.	+51.3	Nat'l Biscuit	+3.4			
Dixie Cup Co		Sears, Roebuck	+3.4			
Nat'l Cash Register	+37.8	Eaton Mfg	+3.2			
Carpenter Steel	+36.1	TXL Oil	+3.0			
National Lead	+35.3	National Dairy	+2.9			
Superior Oil	+35.1	Hooker Electrochemical				
Atlantic Refining		Montgomery Ward	+2.8			
Gulf Refining	+34.0	Ford Motor	+2.7			
Aeroquip Corp	+32.2	Crown Zellerbach	+2.5			
Black & Decker	+30.4	Brigge & Stratton.	+2.5			
Addressograph-Multigraph	+30.3	R. J. Reynolds Tobacco	+2.1			
Amer. Home Products	+29.3	Best & Co.				
Bath Iron.	+28.6	Int'l Harvester	+2.1			
American Cyanamid	+26.6	Cannon Mills	+2.0			
Int'l Business Mach	+26.5	F. W. Woolworth	+2.0			
General Electric	+26.5	Union Bag-Camp	+1.9			
Air Reduction	+25.5	Diamond Match	+1.6			
Amerada Petroleum	+25.4	National Acme	+1.4			
Reynolds Metals	+25.2	Container Corp	+1.4			
Aluminum Co	+25.0	Truex-Traer Coal	+1.4			
Standard Oil (Cal.)		Crane Co	+1.2			
Gen'l Tire & Rubber	+23.2	Campbell Soup				
American Viscose	+23.1	American Tobacco	+1.0			
Goodyear Tire & Rubber	+21.4	Acme Steel	+0.8			
American Sugar	+21.1	J. J. Newberry	+0.4			
Radio Corp.	+20.2	Swift & Co	-0.3			
Bristol-Myers	+19.9	American Zinc	-0.3			
Union Carbide	+19.1	Melville Shoe	-0.4			
Standard Oil (N. J.)	+18.3	Interchemical Corp	-1.1			
Allegheny Ludlum	+17.5	Detroit Steel				
Thompson Products		Ecko Products				
Island Creek Coal		Bell Aircraft				
Trane Co	+16.7	Ward Baking	-3.7			
American Potash	+15.7	Amer. Crystal Sugar	-5.0			
Westinghouse Electric	+15.7	Amer. Radiator & S.S.	-5.4			
United States Steel	+14.1	Admiral Corp	-6.2			
Sterling Drugs	+13.7	America Enka	-8.2			
Safeway Stores	+13.2	S. H. Kress	-16.2			



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week



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PERSONAL BUSINESS

BUSINESS WEEK



It may be worthwhile for you to review your life insurance coverage in view of some new policies now on the market.

Several of these plans might improve your personal coverage, and a couple could mean a great deal to your married children.

"Quantity discount insurance" is gaining popularity and has been adopted by about 15 national companies. It means a saving where you buy ordinary life insurance in large amounts. You get a lower rate—on a regular policy—for quantity purchase.

In general, it works this way, although it varies from company to company: You save at least \$1 per \$1,000 per year on a \$5,000 to \$10,000 policy, and about \$1.25 per \$1,000 on a \$10,000-or-more policy. At age 50, for example, an extra \$50,000 of ordinary life would cost about \$2,285 a year—around 3% less than the \$2,350 you would pay without the quantity discount plan (assuming you bought the \$50,000 worth at the traditional \$1,000 rate).

A new family policy may appeal to your married children who may still be working with a fairly modest budget.

This insurance is bought in \$5,000 units, usually up to \$15,000. With each unit, the husband gets \$5,000 in personal coverage; the wife gets \$1,000 coverage; and each child gets \$1,000. The husband's coverage is straight life. The wife's and children's is term insurance.

At age 21, the children's policies can be converted to straight life without a physical examination.

You pay about 2% more per year for this package than for a conventional \$5,000 policy for the head of the family. So far, about 20 companies handle some variations of this plan.

Note: Don't confuse this with the "family income policy," which has been promoted widely in the past two or three years. Under the latter plan, the father gets ordinary life coverage. At his death, his family gets dependency income until the children have passed a specified age, at which time the widow gets the face value of the policy.

"Jumping juvenile" policies—for your children or grandchildren—are being offered by about 50 companies.

Under this plan, you buy a policy on the child's life with a clause stating that when the child reaches 21, the policy value jumps to five times its original value, and with no further medical examination.

Suppose your child is five years old. The annual premium would be about \$50 per \$1,000—compared with \$15 under a conventional policy. At age 21, each \$1,000 of coverage jumps to \$5,000, with the premium remaining at \$50—compared with about \$100 for a conventional \$5,000 policy bought at age 21.

At age 21, the conventional policy has a cash value of around \$115 (for a \$1,000 unit), with \$240 paid in. The jumping policy has a cash value of \$700, with \$800 paid in. Aside from the higher cash value, the big advantage of the jumping policy is that—at an early age—you can safeguard the future insurability of a child.

Now you can get insurance for people over 65—formerly almost impossible. About 12 companies are aiming at the 65-to-75-year-old group, and at

PERSONAL BUSINESS (Continued)

BUSINESS WEEK JUNE 1, 1957 least one company on the West Coast issues new policies up to age 80.

The cost, of course, is higher than the usual age-65 rate of about \$75 per \$1,000. At age 70, it's 25% to 30% more; at 75, it's 50% to 60% more.

The "common disaster clause" isn't new, but the rising death toll on highways, planes, and trains is giving it new importance. The number of accidental deaths Memorial Day weekend may prove this point.

All you do is have your insurance company add a clause to your policy explaining how you want benefits paid in case you and your beneficiary (or beneficiaries) die as the result of a common accident. There's no charge.

This can save controversy among heirs and—maybe more important—head off some serious tax consequences.

There's at least one insurance "plan"—used freely in the past by some high-bracket taxpayers—that you can no longer count out. That's the borrowing-to-buy insurance idea, which has come under heavy fire lately.

The basic idea is to buy an insurance policy, then make loans from a bank to pay the premiums. Financing insurance this way is an advantage to those in high tax brackets because interest on the loans is tax deductible. You wind up with insurance at very low cost—or almost no net cost, depending on your tax bracket.

Now the Treasury is reportedly hoping to outlaw such plans.

Note to your yardman on watering lawns: Frequent, light watering will produce weak, lifeless grass.

Stick a knife down about 6 in. into the soil. If the blade comes out dry, free of moist soil, then it's time to turn on the hose. Keep sprinklers going until the lawn is well soaked to a depth of 5 in. or 6 in., or for as long as it takes about an inch of water to fall into a can placed within range of the spray. Best time to water: late afternoon and evening.

Start packing: Here's a little known customs rule, in case you're going abroad this year. Each day, you can send a souvenir worth up to \$10 to each of as many friends as you wish back home, duty-free. This doesn't affect your regular exemptions upon returning. However, alcoholic beverages, tobacco products, and some perfumes don't qualify.

Airlines warn that most baggage is lost because bags are not securely tagged at point of departure. In addition to a sturdy outside tag, you should have a tag inside each bag—to avoid having a stranger search through your belongings for identification, in case the outer tag is ripped off. On most airlines, your baggage is automatically covered against damage or loss—from \$100 to \$300. But check the back of your baggage ticket on this.

And for landlubbers: Aerolab has come up with a new computer, the Mile-o-Matic, for measuring miles-per-gallon-of-gas traveled by a car. You can check mileage at various driving speeds, or performance with different grades of gas. Write to Mileomatic, Box 657, Hyattsville, Md. Cost: \$2.95.

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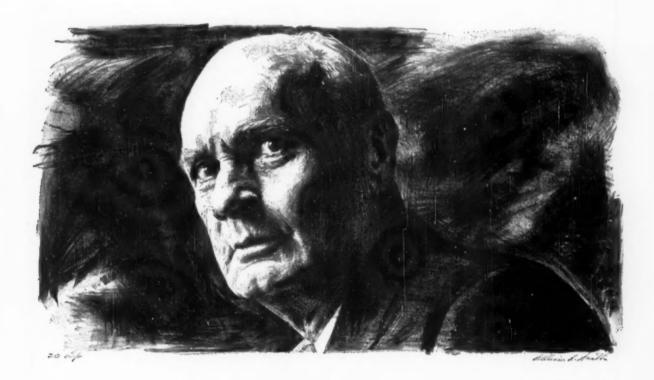
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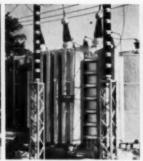
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Surplus Swapping Hits a Tangle

 Program of bartering U.S. farm surpluses for strategic materials has got so big it's causing worries.

It's bogged down in overseas complaints, miners' gripes, charges of "windfalls" for commodity brokers.

But it has strong backing and is sure to be resumed, though with heavy cutbacks and procedural curbs.

Look at the satisfied smiles on the faces of two small boys who have just swapped a penknife for a bullfrog, and you see a classic example of successful simple barter. It's man's oldest means of economic exchange, by which, at least theoretically, two people trade off something unwanted for something desired—and both walk away happy.

The U.S. Dept. of Agriculture, however, isn't smiling any more over its billion-dollar program of bartering surplus domestic farm commodities overseas in return for strategic foreign metals and minerals for national defense. In fact, dissatisfactions with the way the program is working have led to its suspension as an integral part of the government's over-all farm surplus disposal plan (BW-May4'57,p142).

Unsnarling It—This week, Agriculture Dept.'s Commodity Credit Corp., in charge of handling crop disposals, is trying to unsnarl barter from a tangle of complications that have caused considerable concern.

In a few weeks, when the untangling is finished, barter will be resumed. That's in the cards, because it's a pet Administration project, and the politically powerful Farm Bloc strongly favors anything that will help reduce surpluses.

But barter will be cut back substantially, CCC officials predict—perhaps by as much as half. And some procedural limitations are likely to be tacked on.

Complex Machinery—The trouble with crops-for-minerals swapping is that in practice it doesn't fit the easy penknife-for-bullfrog theory. In fact—though from the over-all U.S. government point of view it's a barter program—an individual deal may not, strictly speaking, be barter at all, but a complex transaction involving a series of sales and purchases by the broker handling it.

Many other factors complicate the program—divergent domestic economic interests, foreign relations, and the shadowy intrigue of international high

• Snags-The main fears and snags

that have brought the issue to a head right now are these:

 The fear that barter deals are replacing another leg of the farm surplus disposal program—cash sales—as well as normal commercial crop exports.

Anguished complaints of "dumping" from friendly countries—particularly Canada—that also sell crops on the world market.

 Talk of jealousy among crop growers over the crops to be offered.

• Gripes of some domestic miners over foreign metals taken in exchange.

 Charges that some private commodity brokers, handling barter deals on a contract basis, get a "windfall" of cheap money through loopholes in the law—and that some are exchanging U.S. crops for domestic metals or minerals.

I. Too Much Barter

From the Agriculture Dept. viewpoint, the prime objective of any government surplus disposal program is to move surpluses out of warehouses and into use—if possible, for something in return.

The best deal is for CCC to sell domestic crops, which it bought at propped prices, for dollars at lower competitive world market prices overseas. Next best thing is to sell to dollar-poor countries for foreign currencies. After that come the other methods—including barter.

 Growing—Agriculture Dept.'s biggest fear is that the barter program has grown to the point where it may be displacing some of the markets overseas for the two most profitable programs.

There's no doubt barter has grown substantially since its start in 1949. Over-all, CCC has bartered close to S1-billion worth of farm products—mostly grains—since then, out of a total of some \$9-billion worth of farm surpluses moved out of storage.

But in its first five years, barter totaled only slightly over \$100-million. By fiscal 1956 it had jumped to \$300-

million a year; and by the end of current fiscal 1957 it figures to top \$400-million.

Of course total farm exports have also soared. But in fiscal 1950, barter accounted for less than 1% of the total. This year's \$400-million will be nearly 10% of the \$4.5-billion farm exports.

• Objections—One argument for barter is that it helps create a demand overseas for U.S. farm products; but this applies just as well to sales for foreign currencies, or even giveaways. And many economists argue that barter tends to displace foreign market potential more than do the other methods.

Some Canadian wheat exporters attack both barter and foreign currency sales as "gimmick giveways," citing U.S. talks with Poland as a case in point. This angle brings the State Dept. into the controversy.

II. In Return for What?

The crops exchanged are primarily grains, plus some cotton and cottonseed oil. In return for the nearly \$1-billion worth bartered, the U.S. has received something over \$500-million in foreign metals and minerals—lead, zinc, asbestos, fluorspar, industrial diamonds, manganese, titanium, bauxite, and others. These go into defense stockpiles, or are stored by CCC.

Some domestic metal producers—of lead and zinc especially—have been sold at least mildly on the theory that this helps drain off world mineral surpluses, thus tending to hold up world prices.

But other producers argue that bartered materials (1) encourage foreign producers to expand production and (2) take government stockpile sales away from domestic mines.

Some Pentagon theoreticians get into the stockpile fray by arguing that the U.S. doesn't even need all it has already stockpiled.

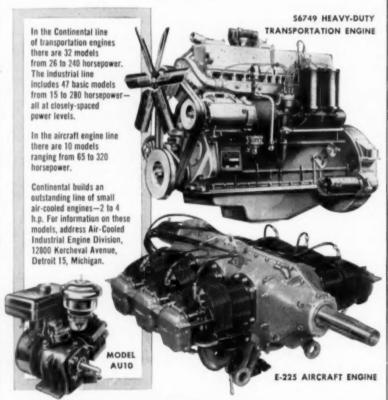
III. Wheeler-Dealer Brokers

But it's in the actual procedural working that the barter program has hit the worst snags. Barter is authorized in no less than seven pieces of legislation, but only the most recent of these (Public Law 480) spells out detailed procedure. Negotiations must originate with private U.S. commodity brokers, and barter contracts allow them considerable leeway.

• Simple Case—Take the simplest kind of deal first. A U.S. exporter sees a market in India for wheat; he contacts

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an Indian manganese producer or trader, agrees to deliver \$100,000 worth of surplus wheat for \$75,000 in manganese.

From CCC, the broker gets \$5,000–5% of the value of the grain. From the Indian trader, he gets \$3,750–5% of the value of the manganese.

But Not So Simple—But it's not always so simple. Grains may be taken from CCC stocks as much as two years before delivery of the strategic materials (until recently, Agriculture Dept. allowed as much as 10 years). In this time, within his contract limitations, the broker can do a lot of things.

Say the Indian manganese producer can't deliver. The broker can sell the wheat to Japan for yen, convert the yen to West German marks through a Swiss banker, buy the manganese elsewhere.

Presumably, CCC would have to approve such a deal. But in such transactions, the broker stands to make or lose more than his 10% charge. Critics say that the way barter is working, some brokers are making, not losing—and making big.

• Loopholes—The fear is that some brokers use the two-year leeway to speculate with the grain, the foreign metal, or the dollars or foreign currency involved. CCC negotiators say they doubt much speculation goes on. But the export-import trade is rife with stories of three-way deals and high finance.

A broker, for example, might get bolivianos for his grain, convert them to marks at a neat profit, use the marks to buy metal. Another rumored deal is to sell the grain for dollars, post a letter of credit with CCC as security (for which the broker pays the bank 4 of 1%), then use the money interest-free for two years.

The broker must certify to CCC the origin of the foreign strategic material, but the original source is often difficult to check, and reports are that brokers sometimes wind up buying domestic minerals. CCC holds this controverts the intent of the law-but again, only one of the many laws specifics foreign source or content.

IV. Controls Coming

The upshot is that CCC is considering limits not only on the amounts of farm surpluses offered for barter, but on the countries to which they may be traded.

Though barter doesn't come up for extension this year (as other CCC disposal programs do), both the Senate Interior and Agriculture Committees want to look into it.

One proposal that both the Administration and Congress may seriously consider is stricter barter contract specifications. END





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Thorium's in the Race for Sure

The AEC thinks well enough of thorium as a source of nuclear energy to spend \$4-million a year studying it.

 But it's also already committed to uranium, and it's too early to say what system will prove superior.

For uranium producers, this means that thorium, available in Canada, is still only a distant threat.

The Atomic Energy Commission has just given the public the most satisfying peek yet at the prospects for thorium as a source of nuclear energy. The revelations were particularly interesting to the uranium industry, which regards thorium as a possible rival.

Some of the disclosures:

· Thorium "represents a large source of potential atomic energy for the future." But that future is still so visionary that there is no reason for panie in the uranium business.

· If and when thorium does come into widespread use, it can be obtained with relative ease from Canada.

• In the meantime, AEC believes "sponsoring research and development of every reasonable possibility -which includes, at the moment, spending an estimated \$4-million a

year on the study of thorium reactors.

Oil on the Waters—The information was contained in a talk by David F. Shaw, AEC assistant general manager, at the first annual meeting of the Uranium Institute of America in Denver. The uranium producers had been alarmed by the interest many scientists were showing in thorium's promise (BW-May 457, p187). AEC top brass-mindful of the staggering U.S. investment in uranium processing plants, for one thing-had been somewhat aloof to thorium, but this wasn't enough by itself to soothe the uranium

Shaw quelled some of their fears, but he didn't for a minute deny that a rosy future might be in store for thorium. What he did was to introduce a few factors qualifying that optimism.

· Several Roads-In the first place, scientists are following several trails in nuclear energy research. Of these, the conversion of thorium into fissionable U-233 in thermal reactors is only one. The researchers on this track favor thorium both because it's believed to be more abundant than uranium and because the reactor involved is technically more simple. But, says Shaw, "other eminent scientists have faith in the plutonium breeder," which uses

Programs of study on the use of thorium in reactors are in progress under direct AEC contract at a number

· Argonne National Laboratory is investigating thorium metal and thorium oxide for use in boiling water re-

· Atomics International is studying thorium's feasibility in experiments with the sodium reactor at Canoga Park, Calif.

· Oak Ridge National Laboratory is looking into the potential of a thorium oxide slurry in a homogeneous re-

· Brookhaven National Laboratory is engaged in basic studies of the use of a thorium-bismuth slurry in experiments with a reactor fueled by liquid

In addition, there are privately fi-nanced projects. Babcock & Wilcox Co. is studying thorium for use in the Consolidated Edison pressurized water reactor. And both Westinghouse Electric Corp. and Pennsylvania Power & Light Co. are trying to harness thorium for homogeneous reactors (BW-Feb. 9'57,p103).

Despite this spate of research, it will probably be a long time before one or another type of reactor is clearly estab-lished as superior. Until then, uranium and thorium are both strongly in the

· Where to Find It-Up to now, most thorium has been derived as a byproduct from processing monazite, an ore of rare earths. India and Brazil have the world's largest known deposits of monazite, but they embargo its export. The U.S. has been depending largely on monazite reserves in Idaho, North Carolina, South Carolina, Florida, and South Africa.

Now, says Shaw, it is known that the most important thorium source-at least in North America-is uranium ore in the Blind River area of Ontario. This ore appears to contain one part thorium to two of uranium. Based on target production of an annual 10,000 tons of uranium oxide from this area by 1959, thorium output might run-4,000 to 5,000 tons per year-probably 10 times the present world rate. Shaw expressed "little reason to doubt that economic extraction of it could be

achieved when and if there is sufficient demand.'

To date, the AEC's modest requirements have been met by purchasing byproduct thorium salts from processors of monazite sands. By yearend, though, the commission will attain its goal of a small stockpile, and it's contemplating no new thorium purchase program at present.

• Technical Thorns—Because AEC has

bought mostly refined nitrate, it has built no thorium refining facilities of its own. However, there are highly developed techniques to do the job, A pilot reduction plant has been con-structed at Fernald, Ohio, to apply a complicated six-step chemical process. Shaw suggests there may also be simpler

and cheaper methods.

There is need, too, for ways to control side reactions that result when thorium goes into a reactor. In the process, Shaw disclosed, not all the thorium is converted into the desired U-233. Some of it becomes U-232, which breaks down quickly into other elements and muddies the brew. And some undergoes fission, which adds radioactive fission products-deadly to handle-to the mixture.

Before thorium comes into its own, these and other technical problems must be licked. As a result, in the near term uranium is more likely to find widespread use than thorium. In any case, as long as uranium is cheap and plentiful, says Shaw, "the market for thorium will be very slow to develop."

· Take Heart-This word was heartening to the uranium producers. So was Shaw's explanation of the government's uranium procurement program. In effect, he said, there is no stockpile of idle uranium-the government supply is all in some phase of processing, or in the weapons stockpile as plutonium or U-235, or on deposit for use as reactor fuel or in Atoms for Peace and other such programs. Much of the supply is also by now in depleted uranium-tailings from processing plantswith only limited use.

But Shaw indicated that it will soon be feasible to start a real stockpile, and, if necessary, AEC will do so. However, he said, a government hoard would not be used to supply uranium for nuclear power plants. That market, when it develops, is expected to be open to the uranium producers. The Euratom program alone will need \$2billion worth of uranium to generate the 15-million kw. it aims for by 1967 in six nations of Western Europe. According to Shaw, there will be enough uranium-producing capacity in the U.S. and elsewhere by 1960 to fill this order without major expansion. END



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Co-ops Seek a Bigger Market

Sunkist and Calavo, big California fruit cooperatives, are going after more business, each in its own way.

Two BIG fruit-growing cooperatives in California are following directly contrasting ways of moving their produce to the market basket—and both claim to be successful under their own special circumstances.

• Sunkist Growers, well entrenched as a California citrus producer, is stepping up its national marketing campaign, yet is pulling back into preoccupation with fresh fruit, as distinguished from frozen concentrate. More than that, it is limiting itself to citrus fruits.

 Calavo Growers of California, formed 34 years ago to market only avocados, is also expanding its sales drive, but it is spreading its product line into all sorts of other specialty fruits: fresh pineapples, dates, figs, limes, Comice pears, mangoes, papayas, coconuts—and even inedibles such as Hawaiian orchids, tea-plant, and Ka Hula plant.

• Why They Diverge—The difference, of course, lies both in the sales volume of the two cooperatives and in what they are trying to sell. Sunkist has a \$188-million annual volume; Calavo had \$13.7-million last year. Sunkist adopted its trademark for California oranges and lemons in 1907, and has spent more than \$75-million since then to make it known; Calavo is just winding up its first year of really pushing its brand name as applied to other fruits besides avocados.

Two former supersalesmen of soap are behind the campaign to make Calavo the magic word for mass selling of tropical fruits. Calavo's general manager, William P. Black (picture), and sales manager, Alfred A. Michaud, both came a year ago from the merchandising staff of Lever Bros.

I. Avocados and Mangoes

Black devotes his time largely to longrange problems: new product lines, grower relations, tax and finance. Michaud wheels around the country to line up new markets, tighten the distribution system, show Calavo salesmen and the produce managers of stores how to push sales of exotic fruits.

 Something to Sell—Calavo started with the avocado, but its ambitions
 soon went far beyond that offbeat salad fruit. It found it couldn't build up a national acceptance for avocados without a national sales campaign, yet the seasonal production in California



A BRAND NAME is essential to the marketing of fresh produce today, says William P. Black, manager of Calavo. The housewife is willing to pay a premium for known quality.

didn't seem to warrant a big merchandising and distribution effort.

In order to justify a national campaign, the co-op had to bring other specialty fruits under the Calavo brand name and level out the seasonal peaks and valleys. It also decided to push sales of its package of fancy fruits to the supermarket chains—the new giants in food retailing—rather than the old produce terminal markets that sell to independent grocers.

• Teaching People to Use It—Along with expanding its product line, Calavo still has its original problem: teaching restaurant chefs and housewives how to use relatively unfamiliar fruits. It took years to win national acceptance for the avocado as a glamorous, sophisticated food that can take its place on the average table.

Calavo was organized in 1923 with 54 members and one employee, secretary-manager George B. Hodgkin. The problem then was to create a market for avocados where there was virtually none. Hodgkin not infrequently filled an order for "½ of a dozen." But, as a sales organization was built up, avocados began to be shipped eastward by the carload. In the early 1930s, despite the Depression, production finally went over 1-million "flats"—a flat is the standard 13-lb. unit.

Today, Calavo has 4,781 growers and markets 60% of the U.S. and Cuban avocado crop. It has 329 fulltime employees—164 in administration and marketing, 165 in production.

• Branching Out—As the co-op looked for ways to balance its seasonal fluctuations—and avocados themselves are

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MAKERS OF PENN/BRITE OFFSET • PENN/GLOSS PLATE • PENN/PRINT EGGSHELL ENGLISH FINISH • ENGLISH FINISH LITHO • SUPER • CLARION PAPERS wildly variable from year to year as crops flourish or fail—it first took on Florida limes as a companion product. Then it adopted Florida avocados, whose growing season is opposite California's. Then, because it was familiar with handling limes, it added Mexican limes. California dates were the next addition, then dates imported from Iran and Iraq. And so the line grew.

Today, Calavo markets about onethird of the 10-million lb. of fresh pineapple imported from Hawaii. These imports don't measure up to the 22million lb. imported from Puerto Rico or the 55-million lb. from Cuba, but Calavo hopes to boost them. The co-op also sees million-dollar markets in the next few years in California figs, Hawaiian papayas, and coconuts.

II. By Bigger Lots

Calavo regards its distribution method as at least as important as its building up of inarkets and brand consciousness. The produce buyer for a supermarket chain isn't going to shop from one terminal market to another to piece together his big order—he wants to buy from one source, in big lots of standard quality.

"Except for a few cooperatives," says Bill Black, "there's no attempt in the produce business to control distribution through one point. When everything is done independently, it adds dollars and dollars to the bill."

Calavo offers the chains a one-stop purchase of an array of fancy fruits, with the advantages of cost savings in bulk purchases and of a well-tried pointof-sale merchandising program.

of-sale merchandising program.

• Showing How to Sell—Calavo's first problem is to convince the chains that they can sell enough specialty fruit to make a good profit. Avocados and papayas and coconuts aren't so easy to sell as canned goods; they can't be stacked like apples and oranges and left to sell themselves—they're more perishable.

The stores must first be sold on carrying such stock, but Les McMahon, sales promotion manager in Calavo's advertising department, says: "You get more return for each dollar spent if you spend it at the point of sale. The crucial part of the product's journey from producer to consumer is the last 30 inches—the length of the house-wife's arm."

So Calavo invests in attractive prepackaging, banners and placards, recipe books to show the housewife what to do with the product. Calavo fruits are being displayed in many stores in a bigas-life "Tropical Fruit Shack" provided by the co-op.

A recent campaign in the Southwest showed how avocado dips could be used with Tostados, a toasted corn chip. Sales in the area zoomed from 50 flats a week of avocados to more than 500.

 Missing No Bets—Following Sunkist's lead, Calavo is giving more attention to advertising based on health angles. Ads in Parents Magazine, for example, stress the value of avocados as baby food; doctors are being sold on clinical values shown by a University of California study of avocados.

Calavo employs a personable young woman named Mickey Riggs to visit restaurants, hotels, and other places where food is prepared in large quantities. She leaves with each cook a personalized file box of recipe cards, followed up by a Card of the Month containing meal suggestions for use of Calavo products.

The co-op is forever trying to make things easier for the housewife, too. One of McMahon's personal projects is to find a simple way for a woman to open the hard shell of a coconut.

III. Service to Growers

Most avocado growers don't work fulltime at it. Many aren't even fulltime farmers—they raise the fruit as an extra source of income. Thus, a cooperative gives them a useful agency to pick, process, and sell fruit.

Among the companion products, dates and figs are the only commodities that Calavo buys outright. The others are handled on consignment, with Calavo taking a commission. It accepts imported fruits at U. S. ports and takes care of all shipping and distribution from there. It would like to have more responsibility over shipments, all the way from the producer, especially since it has become expert in the care of highly perishable goods.

• Tax Question—The continual expansion of companion lines—Calavo's marketing research staff is even now looking into chives, herbs, and peanuts as possibilities—raises a basic question about Calavo's future. As a marketing cooperative, it must according to the tax laws do at least 51% of its business with its members, the avocado growers. If it doesn't, it must give up the favorable tax treatment that's accorded to co-ons.

This year, for the first time, avocados account for less dollar volume than the companion products, partly due to a low avocado crop. This isn't immediately fatal to Calavo's status as a co-op, because the tax law permits averaging over a period of years. However, if avocado production should go into a long slump or the companion lines proved to be the more profitable part of the business, Calavo would be in a bind.

One choice would be to drop the co-op status and become a business,



"It ain't hay..."

But it is "harvest-time" all the time at metal-working plants—gathering and disposing of metal scrap such as this—a job that is solved successfully by the Model HA "PAYLOADER". This versatile tractor-shovel picks up, carries and dumps turnings and other scrap so efficiently that tremendous savings in costs are realized over previous methods.

This plant also has a Pick-up Sweeper which is attached to, and sweeps into, the "PAYLOADER" bucket and uses it regularly to clean aisles, runways and storage areas. The usefulness of the Model HA can be further increased by other available attachments such as fork lifts and tine buckets.

"PAYLOADER" tractor-shovels are helping all kinds of industries solve many bulk-material handling problems, indoors and outdoors. There is a "PAYLOADER" size to fit your needs — up to 2½ cu. yd. bucket capacity — and a nearby Distributor ready to demonstrate on your work. The Frank G. Hough Co., 700 Sunnyside Ave., Libertyville, III.



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subject to higher tax rates. Another would be to take other types of growers into the cooperative structure, such as lime growers, many of whom already belong to Calavo as avocado growers. A third choice would be to try to raise avocado production enough to restore balance with companion lines.

Calavo hasn't decided which bridge it will cross. "Only by emphasizing companion lines can we level our ups and downs in avocados," says Black. "We'll make every effort to remain a cooperative. But even an ideology has to make sense economically."

IV. Sunkist's Strategy

Sunkist Growers doesn't have the problem of building up a market or establishing a brand name. But it faces the competition of the frozen juice concentrates.

The fresh fruit brings the best return to the growers, and only two of Sunkist's orange products are profitable: orangeade and fresh orange juice, both marketed through dairies. It also makes pectin, citric acid, and concentrates for the soft drink business. But products are regarded chiefly as a means of minimizing losses when orange crops exceed demand.

Nearly all of Sunkist's navel oranges are sold as fresh fruit, but as much as half of the Valencia orange crop has been going into products. When the frozen orange concentrate boom started, Sunkist began putting part of its Valencia crop into this product, but the strategy didn't work. Florida growers with lower production costs canned the bulk of the juice, and they were able to set the price—too low.

Sunkist thought it could compete at a premium price under its famous trademark. It paid \$1\frac{1}{4}\text{-million} to California Packing Corp., which had the rights for canned goods. But the premium value of the Sunkist name didn't carry over into the canned concentrate market, where other names were already entrenched.

• Diet and Health Theme—Now Sunkist is back to pushing fresh fruits with advertising keyed to the diet and health theme: Concentrating takes out 75% of the protopectins found in fresh oranges, fresh oranges contain 10 times as much of the bio-flavanoids, fresh lemons are ideal for low-sodium diets.

Sunkist feels the campaign is working. Last year it sold 1,500 commercial juice extractors and 32,000 household models of electric extractors. Sales of fresh fruit rose \$13-million above 1955, to \$143-million; sales of products rose \$8-million to \$45-million last year. The co-op budgeted \$3.5-million last year to advertise its citrus fruits, which make up 75% of the crop in California and Arizona. END



"Our greatest challenge... the development of men"

Ralph Cordiner, President, General Electric Company

"Few expenditures we can make are more important than those for education. A well-educated person produces more and consumes more, makes wiser decisions at the polls, mounts a stronger defense against aggression, and is better able to perform the grave responsibilities of American citizenship.

"Freedom needs educated people. So do business and industry. I earnestly ask you to support the college or university of your choice in its planning for expansion and a stronger faculty. The returns will be greater than you think."



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In Research

The Humble Garnet—Manmade Brand— May Prove Bright Gem for Electronics

To most people, garnets have significance, if any, only as the birthstone for January. But engineers are beginning to find an added importance in them—or at least in their ferromagnetic manmade brothers that are identical in crystalline structure but have been modified chemically so that they are electromagnetic.

That these lab-made garnets had electromagnetic properties was first discovered by Dr. Louis Neel, of Grenoble, in France. Now Prof. C. Lester Hogan of Harvard is studying their applications in the field of electronics,

where they have shown great promise.

The thought is that materials like the garnets could expend the increased efficiency that ferrites can provide for radar and similar transmissions systems, in the lower bands down to 100 megacycles per second. That could be very useful in planes and missiles, or anywhere that the power supply is limited.

Neutron Timer Takes One Hour To Do Month's Work for Scientist

The time of flight of neutrons from a nuclear reactor can be measured, counted, and classified in a single hour by an electronic device developed at General Electric's Knolls Atomic Power Laboratory by Elmer J. Wage and Donald S. Davidson. Previously, it took a scientist a full month of laborious recording to achieve the same results in determining the neutron energy distribution from different types of reactors.

Here, briefly, is how the transistor-equipped flight analyzer works: A neutron beam from a thermal test reactor is chopped by a rotating shutter so that its velocity can be measured. At the end of an established flight path, the neutrons are detected by a counter and the data is relayed to the analyzer; within an hour the analyzer has produced a graph revealing the energy spec-

trum of the reactor.

One Part in a Billion "Poisons" Spotted in Crude Oil Samples

Infinitesimal trace amounts of arsenic, and other matter—as little as one part per billion—can be detected by a method developed by Gulf Oil Corp.'s research center. One part in a billion is comparable to a quarter-inch stain on a string reaching from New York to San Francisco. But that sort of detection can protect Gulf's million-dollar-plus investment in platinum catalysts for producing premium motor fuels.

Certain metals that are sometimes present in tiny amounts in petroleum can deposit themselves on the catalyst, and thus "poison" it into ineffectiveness. Each of Gulf's reforming units now has an annual bill of around \$330,000 for reconditioning "poisoned" catalysts.

around \$330,000 for reconditioning "poisoned" catalysts. Here's how the new Gulf method works for spotting arsenic; for other materials the procedure would be

similar:

The organic matter in a sample of crude oil is destroyed chemically. The residue, in solution, is treated to produce arsine, a volatile arsenic compound. The arsine is reacted with a sensitized paper, which shows different colors depending on the arsenic concentration.

This test, in large amounts of arsenic—such as would be needed to poison a person—can be made visually. But the human eye is too crude to spot the one-part-ina-billion graduations. So the Gulf researchers use a spectrophotometer, and thus can detect smaller concentrations than has ever been possible before.

Solar Furnace That Almost Rivals The Sun Used to Study Refractories

A solar furnace that generates temperatures two-thirds as hot as the surface of the sun is being used by the National Bureau of Standards.

Right now, the bureau is using the furnace to test refractory materials at temperatures up to 3,500C in a controlled atmosphere free from contamination. These researches, like most solar furnace work, are aimed at finding materials that can better withstand the intense heat in atomic reactors, aircraft engines, and missiles

(BW-Jan.26'57,p118).

The bureau's furnace was converted from an Army surplus searchlight with a parabolic mirror 5 ft. in diameter. Besides the study of refractories, it will be used to produce extremely pure samples of the oxides of zirconium, thorium, and uranium. Growing single crystals of these materials should make possible tremendous breakthroughs in high temperature research.

Research Briefs

Still unexplored areas of the physical sciences are being studied by 64 U. S. researchers under grants made in the first quarter of 1957 by the Research Corp. Among the questions: How strong are gamma rays at varying distances, what makes a dye work, what are the physical properties of liquid helium—the only substance that remains liquid at absolute zero?

A chicken that can stand hot weather better is the goal of electrocardiograph experiments by Dr. Till Huston at the University of Georgia. Huston is trying to determine the psychological changes in chickens during hot weather.

Evaluation of radiation effects for their promise in gamma ray dosimetry has been launched at Batelle Institute under a contract with Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. The object is to determine which effects of gamma radiation can best be used as an indicator of high radiation dosages.

DENISON HYDRAULIC POWER works for every industry



Capable of lifing a platform holding 166 automobiles, the 2750-ton Mountaineer is kept on an even keel despite uneven terrain in mining operations with the help of Denison hydraulic power.

Leveling the world's largest power shovel

How Denison 5000 psi hydraulic pumps help to keep Marion Power Shovel's Mountaineer on an even keel

The world's largest power shovel is at work stripping overburden in one of the Hanna Coal Company's Ohio mines. Completed in 1956 at a cost of \$2,600,000, this 5½ million pound colossus is the largest mobile land machine ever built in the United States. It stands as high as a 16-story building, can scoop up 60 cubic yards of dirt at a time, yet is controlled by just one man.

In strip mining work, the Mountaineer is often subjected to rough terrain. To control the level of its 2750-

ton bulk, there is an automatic, electrically-controlled, hydraulic leveling jack at each of the four corners of the huge frame. In operation, these jacks keep the revolving upper frame and superstructure level, despite the fact that the machine may be standing on uneven ground.

Denison hydraulic pumps are incorporated into the hydraulic system, providing a completely dependable, instantaneously-controlled power source.

In machinery, in mobile equipment, or on the production line . . . wherever hydraulic power is serving America's basic industries, you will find Denison equipment in use. Perhaps Denison can answer your need. Write Denison Engineering Division, American Brake Shoe Co., 1178 Dublin Road, Columbus 16, Ohio.

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New Oral Drug for Diabetics

Upjohn Co.'s new diabetic drug, Orinase, is about to be released, will be taken by mouth instead of by injection. It should have broad value in research in human metabolism.

The nation's 1.6-million known diabetics, and the estimated 4.75-million now alive who will become diabetic, can take heart from the commercial introduction of an oral replacement for insulin. The Food & Drug Administration is on the point of releasing Orinase, made by the Upjohn Co. of Kalamazoo, Mich.

The new drug does more than offer a substitute for insulin, which must be injected. It gives medical researchers a long-sought aid in studying the whole range of diseases of the human metabolism-the mechanism of converting food fuel to energy and disposing of

Some researchers call Orinase, a cousin of the sulfa drugs, the greatest advance in treatment of diabetes since 1921, when Sir Frederick G. Banting and C. H. Best isolated insulin and proved its medical value.

· Effective-Clinical reports on more than 1,500 diabetics in the U.S. and in Germany, where the research groundwork was laid, indicate that between 50% and 75% of patients can be aided by Orinase-type drugs, taken by mouth. Among some groups of patients, the percentage is even higher.

So far, Orinase is reported free of the side effects that led to discontinuance of tests last November on another oral drug-BZ-55, made by Eli Lilly & Co. of Indianapolis. In Lilly's tests, about 5% of patients experienced

these side effects.

· Ancient Disease-Diabetes has been known to man for centuries-it was mentioned on Egyptian papyrus dating from about 1500 B.C.-but its exact cause has remained a mystery

As early as 1788, an English physician named Crowley suggested a direct relationship between diabetes and the secretions of the pancreas, one of the body's major glands. But it wasn't until 1921 that Banting and Best, in a Canadian laboratory, isolated insulin from the pancreas of a dog and proved that it could control the body's assimilation of sugar.

People from diabetic families, people who are overweight and sedentary, people between 45 and 65 years of age have been identified as most susceptible to diabetes. More than 75% of all diabetes is first noted after the age of

Discovery of insulin greatly extended the lifespan of diabetics. Until

then, a diabetic could expect no more than 10 years of life; with daily insulin injections and a regulated diet, he could hope for a normal lifespan.

· Sulfa Drugs-Fifteen years ago, Dr. Auguste Loubatieres in France noticed a similarity between the action of certain sulfa drugs and the effects of insulin overdosage. So the search for an oral diabetic pill began. Early attempts to use insulin orally had failed, because the digestive juices destroy it before it can do its work of lowering a patient's blood-sugar level.

In 1952, Dr. J. Fuchs, a young resident doctor in a Berlin hospital, found that a sulfa drug that was being tested for its anti-bacterial action also had the ability to reduce blood-sugar content in patients. This drug was known chemically as carbutamide. It became the basis for Lilly's BZ-55.

Two years later, Farbwerke Hoechst, a German chemical company, produced tolbutamide, closely related to carbutamide and with the same effect on sugar in the blood. Tolbutamide is the

basis for Upjohn's Orinase.

Tolbutamide has a different molecular structure from other sulfa compounds: In place of the usual para-amino group hooked on to its molecule it substitutes a methyl group instead. It has no antibacterial action and it doesn't seem to produce the typical side reactions of sulfa drugs.

· Broader Value-Most important from a scientific viewpoint, Orinase appears to have a profound effect on fat and protein metabolism as well as on carbohydrate metabolism. Thus, it may answer questions about whys of basal me-

tabolism.

There are three theories about how the sulfonvlureas succeed in lowering the blood-sugar level in people:

· By decreasing the effect of an insulin-destroying substance in the body of a diabetic.

· By stimulating the formation and/or liberation of insulin from the patient's pancreas.

· By depressing one or more of the processes in which sugar stored in the liver is released into the blood, thus intensifying the action of whatever small amount of insulin the diabetic's body is producing.

Further research with Orinase may settle which theory is correct, besides explaining the mechanical action of

metabolism itself. END



Weeds are a hazard you can't afford

Destroy them with Baron, Radapon and other Dow weed killers

Another car filled with highly flammable material is due in any minute. There's a small leak in the pipeline in the foreground. All that's needed is a discarded match to transform this loading dock into an inferno.

Fire is the biggest hazard caused by weeds, but it's not the only one. Uncontrolled vegetation also hides poisonous plants and things to trip over. It causes inconvenience to workmen, obscures vision around security fences and gives the whole plant an untidy, sloppy appearance.

Get weeds out of your picture once and for all with Baron®, Radapon® and other Dow chemical weed killers. They're economical, safe and easy to use. If your problem is a large

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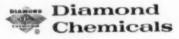
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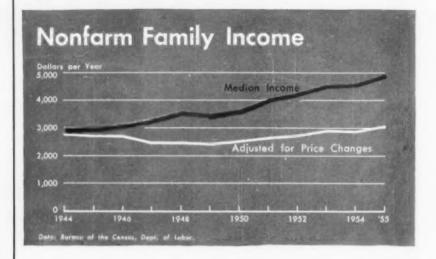
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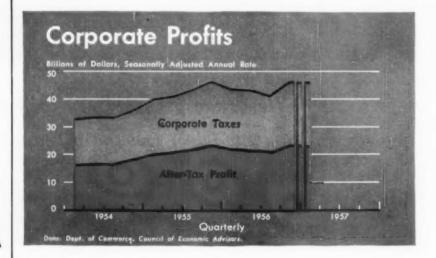


A Little Left Over

It took almost ten years for the purchasing power of nonfarm families to outgrow the effects of the postwar inflation. In the decade 1945-1955 higher money incomes were offset or more than offset by higher prices.

The median money income—the income above and below which an equal number of incomes fall—has risen steadily since the end of World War II. In 1955, it hit \$4,700—\$300 over the previous year, and about \$1,500 or nearly 50% above the 1947 level, according to

a Bureau of the Census estimate. However, throughout most of this postwar period, the rise has been largely offset by higher living costs. Adjustment of the median income for price changes by means of the consumer price index shows the first significant gain in 1955. Although this calculation also places 1953 and 1954 real income or purchasing power slightly over the wartime level, the differences are not significant because the figures can be regarded as approximations only.

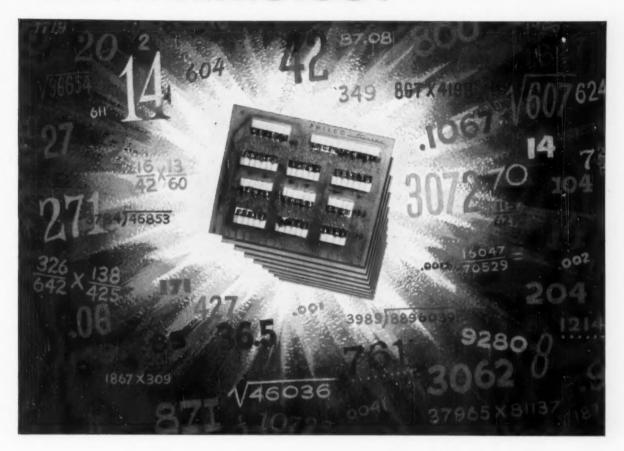


Still Riding High

First-quarter corporate profits maintained the high rate recorded in the last quarter of 1956. Projected on an

annual basis, they are estimated at \$46.5-billion (before taxes) by the President's Council of Economic Advisers.

MATHEMAGICS!

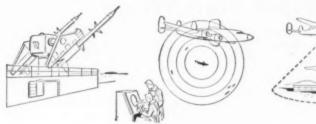


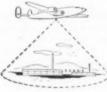
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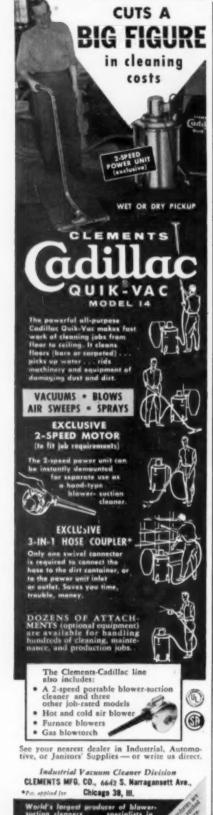
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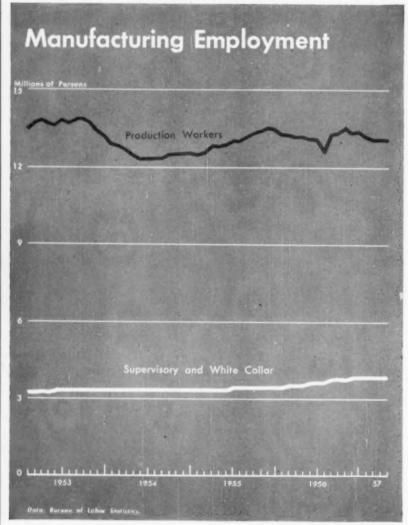
Out of Philco laboratories come far reaching developments in vital military electronic equipment to make a stronger U.S.A. on land, sea and in the air. Philco is proud to be working with the Armed Forces in all parts of the globe with a worldwide service organization of trained specialists.



That's just a shade below the \$46.7-billion annual rate chalked up in the fourth quarter of 1956. And it's a gain of 6.4% over a year ago. The fourth quarter of 1956 has been surpassed only three times. During the Korean War, the annual rate of corporate pre-tax profits reached \$47.1-billion in the third quarter of 1950, \$48.9-billion in the fourth quarter of 1950, and \$47.9-billion in the first quarter of 1951. The

full year 1956 established a record.

After tax corporate profits are estimated at \$23-billion for the first quarter of 1956, they were \$23.1-billion. The 1956 quarter ranks as the third highest in history. First and second place are held by the third and fourth quarters of 1950 when after-tax profits were \$26.1-billion and \$27.1-billion, respectively.

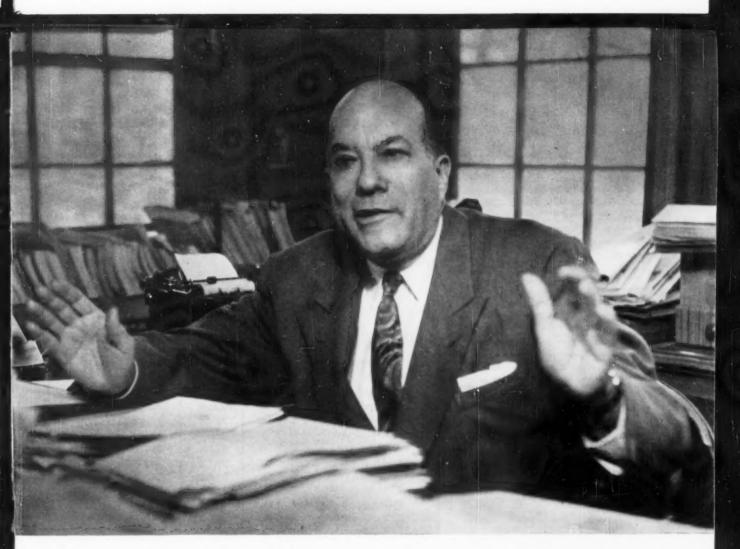


Blue Collars Turn White

Record factory output in recent months has been achieved with fewer workers on the production line—slightly fewer than a year ago, and a whole lot fewer than in 1953. By contrast, the administrative, sales, and supervisory personnel required has been rising steadily (with only a flattening out of the trend during the 1953-54 recession, when production worker employment

plunged by more than 1½-million). Call it automation, higher productivity, or what you will, the fact is that postwar investment in new plant and equipment has greatly altered the manufacturing employment trend. Reduced to the simplest terms, the result is this—23% of plant workers were in non-production jobs this April against just

over 19% at this time in 1953.



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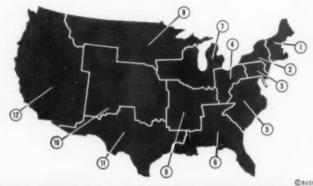
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The Income Pattern:

Business Week's Regional Income Indexes

U. S. Incomes: Up 6.0% From Last Year



COBUSINESS WEEK

Federal Reserve District	% Change vs. year ago	March 1957	The Indexes Feb. 1957	March 1956
1. Boston	+7.8%	284.3	285.1	263.8
2. New York	+7.2%	307.0	307.5	286.5
3. Philadelphia	+5.2%	293.4	293.5	279.0
4. Cleveland	+4.2%	348.7	348.9	334.5
5. Richmond	+6.1%	375.1	369.2	353.6
6. Atlanta	+6.6%	452.3	448.8	424.3
7. Chicago	+ 5.9%	358.2	357.1	338.4
8. St. Louis	+ 2.9%	327.3	327.5	318.1
9. Minneapolis	+6.3%	361.7	357.4	340.3
10. Kansas City	+4.5%	408.7	407.1	391.0
11. Dallas	+ 5.6%	499.6	497.6	473.1
12. San Francisco	+6.9%	401.0	400.0	375.1
Nation	+6.0%	356.3	355.2	336.2

1941 = 100; adjusted for seasonal, March figures preliminary; February revised.

Still Breaking Records

Regional incomes for March continued their year-to-year gain for the eighth consecutive month. Boston led, up 7.8%.

U.S. incomes in March moved to their eighth consecutive high-6.0% above March, 1956. Over-all, the March income pattern shows the same stability characteristic of the nation's industrial output for the early months of the year; the rate of increase over a year ago has held to about 6%. By regions, gains ranged from 7.8% in Boston to 2.9% in St. Louis.

From February to March, the nation's income was up 0.3%, also in line with the preceding two month-to-month

gains. Richmond scored highest-up 1.6%. St. Louis declined the most, down 0.4%.

Six regions-Boston, New York, Philadelphia, Cleveland, St. Louis, and San Francisco-lagged slightly behind their all-time highs in March. However, with the exception of Philadelphia, no region's income was more than 1% off its peak level. Philadelphia dropped 1.9% from the high reached in December. Pennsylvania has several areas where there are more job seekers than job openings, and this situation is expected to continue for at least a few months longer. These areas include Scranton and Wilkes Barre-Hazleton. Less severely affected are Erie, Harrisburg, Lancaster, Philadelphia, Pittsburgh, Reading, and York. END

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New Phase in the Fight for Peace

As the summit meeting at Geneva in 1955 demonstrated, any move—no matter how slight—aimed at easing international tensions inevitably arouses widespread hopes for a permanent peace. Such hopes are once again in evidence due to the Administration's decision to press for a limited disarmament agreement.

It is important to recognize that a permanent and lasting peace is a long way off (page 33). Any initial disarmament agreement, if one comes, is likely to be little more than a preliminary and tentative step in the direction of peace. It is precisely at this stage, before the discussions give rise to a great deal of wishful thinking, that we must clearly establish our basic objectives.

First, there should be no question in any mind about the essential wisdom and basic rightness of exploring this or any other avenue that offers a hope, however slim, of leading to peace. Pres. Eisenhower is entitled to the support of the entire nation in his attempt to reach agreement with the Soviet Union. With both sides having the power to annihilate each other, no other course is possible.

We must not blind ourselves to the immense difficulties involved in dealing with an enemy whose fundamental political philosophy is so antagonistic to our own and whose record in international treaties is so infamous.

Nevertheless, fighting for peace is the only way to bring about a reduction in the heavy burdens associated with an endless armaments race. The economic cost has already proved too much for Great Britain. With our great resources in materials and manpower, we have been able to bear the cost. But there is no question that we, too, feel the pressure.

For that matter, so do the Communists. They have succeeded in building their military position by deliberately limiting living standards. Consumers in the Soviet empire have become increasingly restive under this policy, and it is this pressure that has forced the Kremlin to make concessions at home and seek a modus viviendi abroad.

Position of Strength

We must not relax merely because the Kremlin appears ready to meet us halfway. The only secure basis for an agreement is our ability to negotiate from strength. Defense Secy. Charles Wilson was right when he said last week that "this is a poor time to take the chips and cards away" from the President and his policy makers.

By the same token, there is no reason for the business and financial community to be fearful of peace talk. A permanent peace would, of course, have a profound impact on our economy. The cost of defense—the payments for past wars and the preparations for future ones—is so large a part of government spending that any sizable reduction would mean important readjustments. But the U. S economy has demonstrated its ability to make sweeping adjustments. There is no reason to assume that given adequate time to make the shift it could not convert the money and resources now consumed by armament into higher standards of living for us all.

In any case, there is no such adjustment even remotely in prospect now. The very most we can hope for at present is a modest curtailment in defense spending. A reversal of the upward pattern would be welcome, but we must not cut back our defenses until agreement is reached.

Wall Street might bear all this in mind before it gets the peace jitters.

What Sort of Research?

Expanded economic research—a worthy cause usually supported only by economists—won an influential advocate last week in the person of Charles M. White, chairman of the Republic Steel Corp.

Addressing a session of the Iron and Steel Institute, White urged that research in economics be encouraged to help eliminate some of the guesswork about how the national economy operates. "We spend billions of dollars and millions of manhours for research in physical sciences," said White. "Let's spend what it takes to understand the workings of our economy."

It would be easy to say, "White's right," and let it go at that. But we find ourselves wondering how willing businessmen or trade unionists or other groups in the society really are to apply the same rules of the game to economic research as they apply to research in the physical sciences.

Research in the physical sciences is beholden only to truth itself. It proceeds to conclusions wherever objective evidence and hard logic may lead—no matter how pleasant or unpleasant those conclusions may be, no matter how much they may confirm or destroy pre-existing assumptions or conclusions.

Unfortunately, economic research is too often regarded as a procedure for proving what you're already sure is true—that we live in the best (worst) of all possible (impossible) worlds, and should undertake policies already set forth in preceding statements to keep things that way (change them fast).

On condition that economic research be kept as objective, free, and open to fresh conclusions and discoveries as research in the physical sciences, we're happy to agree completely with White.





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